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AGRICULTURAL DEVELOPMENT IN
THE UNITED STATES, 1900-1910¹

SUMMARY

The agricultural area largely occupied by 1900, 2. — Proportion of land under cultivation in 1900 and 1910, 3. — Proportion of improved land, 4. — How agriculture will expand in the twentieth century, 7. — Increase in value of farm property, 11. — Slight increase in *quantity* of farm produce, 12. — Large increase in *value* of crops, 13. — Increase of prices proved, 18. — The years 1899 and 1909 representative, 24. — Agriculture is not keeping pace with population, 25.

ONE of the most remarkable changes which took place in the United States during the nineteenth century was the extraordinary expansion of agriculture. An entire continent was seized, the former inhabitants were dispossessed, and the land was divided among a new people and brought into general use. It seems impossible that this should have been accomplished in so short a time, and that it was accomplished will be set down as one of the marvels of all time. It is not my purpose, however, to dwell at

¹ All of the statistics quoted have been made public in some form by the Bureau of the Census, either in the form of press notices or bulletins of the agricultural division. They will appear later in the Abstract of the Thirteenth Decennial Census and in the General Reports issued by the Census Bureau.

length upon the extent of the movements of the last century, nor is it my purpose to go into detail with respect to the rapidity with which the changes took place. Inasmuch as the changes of the nineteenth century have already been presented to the public in many forms and are probably better known than those of the twentieth century, I propose to give most attention to the agricultural development of the first decade of the twentieth century.

Suffice it to say in opening that the very rapid movement looking toward the extension or expansion of agriculture into all parts of the country during the last century came almost to a standstill with the close of the century. The area available for agricultural purposes was very largely occupied between 1800 and 1900. It is true that there is still a large amount of land which must be made available, and the agricultural industry will continue to expand. Land now thought unavailable for agriculture will soon be found to be available or will be made so. Water will be drained from the land where there is too much, and carried to the land where there is not enough; stones will be carried away; and stumps will be torn out. Land which is now thought to be too sandy or too gravelly will be brought into use by new scientific methods. Land which is now thought to be worn out will be brought into bearing again. Some land which is now in forests will be used for agricultural purposes. In these and various other ways the agricultural area will expand during the twentieth century. But this expansion, when compared with the movement of the last century, will be of a different kind, and it will be small, indeed will be insignificant. The change in methods of farming, however, may be greater during the present century than during the last.

In proof of the above statement, I wish to submit briefly some of the statistics gathered at the Census of 1910 and compare them with those gathered at the Census of 1900. The increase in acreage of land in farms during the decade amounted to only 4.8 per cent. The increase averaged approximately 4,000,000 acres per year. On the other hand, the increase during the thirty years before 1900 was almost 15,000,000 acres per year. This statement in itself is sufficient evidence of the fact that the high tide was reached before the close of the last century, and that the expansion since 1900 has been and doubtless will continue to be comparatively small.

Before leaving this phase of the subject, attention should be called to the fact that altho the movement doubtless will be slow, there is room for it to continue over a long period of time, depending on the needs of the people, scientific progress, and initiative displayed. Altho the movement during the last century was rapid, only 44.1 per cent of the land area of continental United States was actually included in farms in 1900. In 1910 this had increased to only 46.2 per cent. Thus, between 1900 and 1910, 2.1 per cent of the entire land area of the country was brought into farms. By quoting these figures I do not mean to leave the impression that all of the other 53.8 per cent can ever be brought into farms. This represents the land in mines, the mountain areas, the land occupied by cities, towns, and villages, the railroad rights of way, the public highways, deserts, swamps, and forests. Much of this land, however, can be made available for agriculture and much will be brought into use. During the last century it was possible for the movement to be rapid because special knowledge and advanced scientific principles were unnecessary.

Natural fertility of the soil, plenty of land available, and advantageous climatic conditions made rapid advance possible. The movement of the twentieth century must be very different from that of the nineteenth.

To say that the amount of land in farms increased very slowly during the last ten years, and that the amount of land easily available has been reduced to a very low ebb does not mean that further agricultural development is limited to the bringing of new land into farms. Much of the land which is at the present time included in the farms of the United States has never been improved. The Census reports for 1900 showed that only 49.4 per cent, or slightly less than one-half, of all of the land in farms was improved. In other words, only 21.8 per cent of the total land area of the United States was reported as improved at that time. It would seem strange if only one-fifth of the total land area of the United States could be actually used for agricultural purposes. It may be noted, in passing, that much of the unimproved land is also used for agricultural purposes, inasmuch as it is used more or less for grazing. Yet the total income from the use of this unimproved land is very small. It would seem that the farmers of the United States, inasmuch as they were free to choose the best land available at the time they became farmers and inasmuch as they have now looked over the entire country, would choose land which could be most readily improved, and therefore it is very likely that the lands now in farms in the United States are in the sections most adapted to agriculture. It is, therefore, reasonable to conclude that much of the development of the twentieth century must turn to improving land already in farms but which in 1900 was woodland or other

unimproved land. I have already noted that during the first ten years of the new century the increase in acreage of all land in farms was only 4.8 per cent. During this same period, however, the increase in improved land in farms was 15.4 per cent. Assuming that only 15.4 per cent of the land brought into farms during the decade was improved during that time, it is clear that nearly fifty-eight million acres of land which was in farms but unimproved at the beginning of the century was improved between 1900 and 1910. In 1910 the improved land in farms represented 25.1 per cent, or about one-fourth of the total land area of the United States, and represented 54.4 per cent, or slightly more than one-half, of all land in farms. It is reasonable to believe that as we proceed in the new century, much of the woodland and other unimproved land in farms, situated as it is in the most favorable farming regions of the United States, will be improved and developed.

Attention was called above to the fact that in 1900 only 49.4 per cent, or slightly less than one-half, of all land in farms, or only about one-fifth of the land area of the United States, was reported as improved. The Census of 1900 showed that in 1899 only 283,218,280 acres of the improved land were devoted to crops for which it was possible to secure a statement of acreage reports. Thus in 1899 only 68.3 per cent of the improved land in farms was actually used for cropping purposes. In other words, only 33.8 per cent of all land in farms was reported to be in cultivated crops. This was only 14.9 per cent of the total land area of the country. The Census of 1910 presents a corresponding report. In 1909 only 311,293,382 acres of land were reported as actually in crops for which acreage reports were secured. The crops with acreage reports,

therefore, occupied only 16.4 per cent of the total land areas; 35.4 per cent of the total land in farms; and 65.1 per cent of the total improved land.

The question necessarily arises as to the use made of improved land not accounted for in 1909 and 1899. These statistics have been criticised, it being contended that much land was reported as improved which should in fact be reported as unimproved. Having been intimately associated from its beginning with the Census of agriculture taken in 1910, but with no desire to defend it if it should not be defended, I wish to call attention to the fact that in 1909 the area reported as improved, but for which no crops were specified, must have existed in the form reported in order to represent current conditions. In the first place, no acreage report was secured for vineyards and orchards. Without attempting to make an absolute estimate of the probable number of acres of improved land devoted to these branches of agriculture, it is easy to show that at least 8,000,000 acres of land, probably 10,000,000 acres, were used for these purposes in 1909. Much more important than the land occupied by fruit and nut trees and vines is the very large improved area in pastures. In the northeastern part of the United States especially, where the farmers have learned to rotate their crops and where the live stock industry is important, improved pasture land is an important feature of the average farm. It is my belief that in a large part of the country the improved land not reported in specified crops is largely used as improved pasture land. In other parts of the country, where rotation and diversified agriculture have not been introduced, it is very common to leave land lying fallow after it has been cropped four or five years in succession. This land is reported as improved altho

not actually in use in 1909. In addition to the vineyards and orchards, it is easy to account for about 20,000,000 acres of land in the house yards, barn yards and lanes of the farms of this country. Even this estimate allows only 3 acres for each farm.

One of the movements of the present century must be a more complete utilization of the improved land. Land lying fallow must be brought into constant use; land now reported as improved pasture must be made more productive, and it may even be part of the movement to do away with improved pasture land in due course of time, inasmuch as larger quantities of product could be raised on the same land and fed to the animals in another way; and woodland and other land not improved must be converted into good pasture land.

The expansion in agriculture during the twentieth century will, therefore, be in marked contrast to the expansion during the nineteenth century. During the last century, as noted above, the great movement was to the West, — the ordinary course was to locate a piece of land which required comparatively little labor to bring it into use, claim it, and convert it into a farm. The movement during the twentieth century will be along four distinct lines, each different from the movement of the nineteenth century. Briefly, the first of these will be to make farms out of land not now in farms by draining wet places, irrigating dry places, pulling stumps, moving stones, and the like. The second will be somewhat similar to the first. It will be to improve the woodland and other unimproved land now in farms by the processes noted above. The third will be to put into active and more constant use the land already reported as improved. This means the elimination of summer fallow and better utilization of other land reported as improved but not

accounted for in the report of specific crops. The fourth, unlike the third, will be the movement towards more intensive cultivation, better farm methods, and better organization of the farm work.

Now the four movements which I have indicated above as possible and, indeed, as necessary, if the food supply of the United States is to be maintained at its present level during the twentieth century, have already begun. But they are so much slower than the increase of population that agriculture has fallen far behind and is at the present time falling further and further behind. There is no question in my mind that this failure to keep pace with the general industrial movement of the country is one of the most important causes of the high cost of living so much talked about at the present time. Unless some of the movements indicated above progress with much greater rapidity than now, the high cost of living will go even higher.

When the old movement stopped, when the frontier had disappeared, when the people commenced to say to themselves that there was practically no more free land, they turned their attention more and more towards other activities. They turned to manufacturing, to transportation, to the trades, and to the professions. This fact is well known to all who have observed closely and can also be demonstrated statistically. The actual extent of the movement should be briefly set down in order that the entire situation may be made clear. During the first ten years of the present century, the number of farms in the United States increased 10.9 per cent. This was clearly due to the splitting up of many large farms; since, as already noted, the amount of land in farms increased only 4.8 per cent. Further, this increase of 10.9 per cent

in the number of farms accounts very largely for the increased acreage of improved land in farms (15.4 per cent) as also the increased acreage of land in crops (9.9 per cent). In contrast to the increase in the number of farms, the increase in the rural population was 11.2 per cent. It would appear that the increase in the population of towns and villages with less than 2,500 inhabitants was not much greater than the increase in the number of farms. In contrast to this comparatively small increase in the number of farms and in the rural population, the increase in the urban population amounted to 34.8 per cent. With these facts before us, it is easy to see that agriculture had reached practically its limit in 1900 so far as following the old method of expansion was concerned, and also that the four movements to which I referred had not gotten well enough started to keep pace with the increase in population which is rapidly concentrating in cities.

During the nineteenth century the farmers produced very much more than the people of the United States could consume, and the surplus was shipped to foreign countries. As agriculture developed less rapidly and as the proportion of the people who lived in cities increased more rapidly, the exportation of the raw materials of agriculture necessarily decreased. We have now reached a stage in the history of this country when farmers in average years do not produce much more of the raw materials used for food, beverage, and clothing than is needed within the country. In poor years the production may not in the future equal the demands of the consumers. In exceptionally good years, it will be possible to export a considerable amount of raw material or reserve it for the bad years to follow. I think it is very doubtful whether the four new movements towards agricultural development

which have been indicated above will be more than sufficient to keep pace with the movement of population. If, by inaugurating these four movements, it is impossible to keep pace with the population, it will be necessary in the future to resort to the importation of supplies.

Inasmuch as development during the first decade of the new century was not as rapid in agriculture as in other industries, the farmers have been placed in a more or less advantageous position because of their ability to force up land values and take advantage of the increased pressure. This is true, however, only of those farmers who have become land owners. There are at the present time about 6,362,000 farmers in the United States. Only about 4,000,000 of these own all or a part of their farms, and many of those who own their farms have not paid the entire purchase price. The point that I wish to make is that those who have title to their land, — whether they have the land entirely paid for or not, — are being placed more and more in advantageous positions. Land values during the next half century will change greatly. Tho in many districts doubtless the values are at the present time too high, generally speaking they will advance. The movement will be in two directions. One of these will be a readjustment downward to a reasonable level, and the other will be a readjustment upward to conform to average values in other parts of the country.

I have outlined above briefly the characteristics of the movement during the nineteenth century and the characteristics of the movement which is likely to take place during the first half of the twentieth century, and have quoted some statistics to substantiate the conclusions. In order to show the extent

to which this movement actually is taking place, it is worth while to quote more of the results of the Census of 1900 as compared with those of the Census of 1910. In 1900 the average value of all farm property per acre of land in farms was \$24.37; in 1910 it was \$46.64. This is an increase of 91.4 per cent during the decade, — an increase almost equal to the total increase of all past time. This large increase was due more to change in the value of land than to change in value of buildings, implements and machinery, or live stock. The average value of land per acre (without buildings or equipment), for the United States as a whole, was \$15.57 in 1900 as compared with \$32.40 in 1910, — an increase of 108.1 per cent. Land is, therefore, clearly the most important factor. In contrast, the average value of buildings per acre of land in farms increased from \$4.24 to \$7.20; that of implements and machinery from \$0.89 to \$1.44; and that of live stock from \$3.67 to \$5.60.

Another way to show the movement is to study the average value of farm property per farm. This, however, is not as satisfactory a basis as the average value per acre of land, because of the double movement. Between 1900 and 1910 the average size of farms decreased from 146.2 acres to 138.1 acres. This decrease of 8.1 acres, or 5.5 per cent, in the average size of farms counterbalanced in part the increase in the average value of all farm property per farm. On the other hand, the average acreage of improved land per farm increased 4.2 per cent, the decrease being entirely in the unimproved land. The increases, however, are not as large as they would have been had the farms remained the same in size. The average value of all farm property per farm for all farms in the United States was \$3,563 in 1900, whereas in 1910

it was \$6,444. The increase in the value of land alone was from \$2,276 per farm to \$4,476 per farm; that of buildings was from \$620 to \$994; that of implements and machinery was from \$131 to \$199; and that of live stock was from \$536 to \$774.

When all of these facts are brought together, it becomes clear that during the first ten years of the new century the increase in *quantity* of farm property was very small. I have already noted that the increase in the acreage of land in farms was only 4.8 per cent. Since the number of farms increased only 10.9 per cent, I think we may safely assume that the number of sets of farm buildings increased probably not more than 10.9 per cent. Doubtless during the decade there were many additional buildings added to those already on farms; but the number of new buildings erected was probably far short of the increase reported in value of the farm buildings. The increase in the acreage of improved land in farms was given as 15.4 per cent. We may assume that the increase in the quantity of implements and machinery was at least 15.4 per cent, and since the use of implements and machinery is increasing in agriculture more or less rapidly, we may assume that each farm has added to its supply of these classes of equipment; but I think we are safe in assuming that the quantity of implements and machinery did not increase as rapidly as the increase in value reported. Statistics are available showing the increase in the number of each class of domestic animals, as well as of poultry and bees, on farms, and the results show clearly that the increase is largely in average value per animal and only to a very small extent in the number of animals. The movement, therefore, during the first decade of the new century was clearly a very small increase in the

quantity of agricultural property, but an extraordinarily large increase in the reported value.

When the quantity of farm property and farm production are under consideration, it is easy enough to predict that the movement of the next half century will be along the lines indicated earlier in this paper (draining of swamps, irrigation of arid and semi-arid lands, fertilizing worn out land, rotating crops in the most advantageous way, cultivating more intensively in order to increase production). It is also easy to predict that the rate of increase in the quantity of property will probably never again be as high as it was during the nineteenth century. But it would be hazardous even to attempt to predict what the movement will be with respect to the values of farm property, further than the readjustment in land values indicated above. We should keep constantly before us, however, the remarkable fact that the increase during the last ten years in the value of farm property was equal to the total increase in the value of farm property in the United States from the landing of Columbus until 1900. It would seem reasonable to contend that this movement could not continue at the same rapid pace; and yet we cannot discover counteracting forces.

Many reasons have been given from time to time for the increase in the prices of almost everything which can be sold and purchased. It is doubtless true that the various reasons for the increase in prices of all other articles of exchange apply also in the case of farm land and equipment. I wish only to add some of the special reasons why farm land has increased in value so rapidly during the last decade. Free land being practically a thing of the past, — no longer available for those who wish to take up agriculture,—

the prospective farmer was forced to start in a new way. Instead of moving to the frontier and depending upon the labor of himself and family to build up a farm, he was forced either to buy land or to start as a tenant on some land already in some other person's farm. The number of people wishing to buy land or to become tenants was thus increased, — being equal to the former number in this class and swelled by all those who otherwise would have gone to the frontier. The demand exceeded the supply. It was natural that the owners of land, finding more buyers than formerly, and finding more applicants among those who would become tenants than formerly, were able to secure either a larger price for the farms which they sold or a larger cash rental (or equivalent) for the farms which they leased. This problem, however, remains: if the farm did not produce more goods, or if the goods produced did not sell for higher prices, the prospective purchaser would be unable to pay the higher price for the land or the higher amount for rent, and therefore higher land values and higher rents would have been impossible, unless the new owners and tenants were reduced to a lower standard of living than formerly, or unless their surplus earnings of former years were reduced. That land values did go up, that the standard of living did not go down, and that farmers in the past were not able to save large amounts of their savings are, I believe, established facts. The extent to which land values increased is also an established fact. It is natural, therefore, that we should at once ask the question: "was the increase in price which the farmer received (whether due to the increase in quantity of goods produced or not) sufficient to warrant the increased capitalization of farm lands?"

The total value of the crops produced by the farmers of continental United States in 1909 was \$5,487,161,-223, as compared with \$2,998,704,412 in 1899. There was, therefore, an increase in the total value of crops amounting to \$2,488,456,811, or exactly 83 per cent. For our purposes we must assume that the figures here given represent the value to the farmers of all crops which they produced. No doubt these figures are not exactly the amount which they received for their crops, because in many cases the crops were fed to animals on the farms. But the values given represented the amounts which farmers could have got for the crops had they sold them in the local markets. For our purposes it is sufficient to state that the figures here quoted represent the *farm values* of all farm crops for both 1909 and 1899. In order to arrive at a figure representing the average value of all crops per acre of land in crops, I have assembled for 1909 and 1899 all crops for which it is possible to secure satisfactory acreage reports and value reports at both Censuses. For this purpose it was necessary to eliminate an important group of farm products, namely, orchard fruits, grapes, tropical fruits, and nuts. In these cases it is almost impossible to secure a statement of the exact number of acres involved, inasmuch as hundreds of thousands of farmers have small numbers of fruit trees in and around their yards for which it is impossible for them to report acreage. But inasmuch as we are able to eliminate the values of these crops for both years and do not include the acreage figures, the figures which remain are comparable. It should be noted in passing that these crops are far from the top of the list when we consider all farm crops. Several small crops must also be eliminated, but these are, practically speaking, insignificant.

Among these are maple sugar and syrup, for which there were no acreage reports; and also the forest products of farms. The total value of crops for which reports of acreage were secured in both 1909 and 1899 amounted in 1909 to \$5,073,997,594, and in 1899 to \$2,768,339,569. In both cases they amounted to more than 90 per cent of all crops as measured by value. The increase in the value of these crops was \$2,305,658,025, or 83.3 per cent.

Turning now to the acreage of these crops, I wish to note that in 1909 the acreage of all crops with acreage reports was 311,293,382, and for 1899 the acreage was 283,218,280. The increase in the acreage, therefore, amounted to 28,075,102 acres, or only 9.9 per cent during the decade. It is perfectly clear from these figures, even if we went no further, that the average value of farm crops per acre of farm land under cultivation was greatly increased. It amounted to \$16.30 in 1909 as compared with \$9.77 in 1899, an increase of \$6.53 per acre. This is an increase in the average value of crops per acre of 66.8 per cent. With these figures before us it is easy to see at least one of the reasons why the reported value per acre of farm land has advanced so rapidly. The total value of farm land increased because in the first place there was an increase in the total quantity of land in farms amounting to only 4.8 per cent. In the second place, there was an increase in the improved land in farms amounting to only 15.4 per cent. These changes in themselves warrant a material increase in the total value of farm land, but they do not justify an increase such as I have recorded above. When we turn, however, to the income from farm land and find that the average value of crops per acre has increased 66.8 per cent, it is not surprising that the farmers of the country

have reported their lands at a higher figure than formerly. The remarkable feature of the reports is that the farmers should be able to judge so accurately the justifiable increase based upon the increase in the quantity of farm land combined with the increase in acreage of improved farm land, which in turn is combined with the increase in value of crops per acre of land actually in crops.

Before leaving the subject it will be well to refer to other causes for the increase in land values. Prior to 1900 (approximately) land was available in such large quantities that many persons wishing to buy land were unwilling to do so because of its producing capacity only. Much of the free land was equally as productive as the land for which the buyer must pay a price. Therefore the intelligent buyer bought because of desirable location and advantageous situation. Probably a considerable part of the price paid was paid because the land was favorably located on a river or lake, or because it was gently rolling, or the water was good, climatic conditions favorable, or the general outlook promising. Another part of the price was paid because of the adaptability of the farm. It was easily tilled, the fields were regular in size, there were no obstacles, the soil worked up well, or some other characteristic of this sort prevailed. But probably more important than either of these two facts has been the advantageous situation with reference to the market. Either the farm was close to the railroad where supplies might be secured, or the roads were good from the farm to the city or to the railroad, or the farm was advantageously situated with reference to large population centers and good markets. Because of an advantageous situation freight rates on supplies to the farm were low, as also were freight

rates on the products from the farm. Thus the farmer had a larger surplus from his products and paid a lower price for supplies purchased than otherwise would have been the case. The surplus was attributed to the farm and higher land values resulted. In addition to these reasons for differences in land values in the past, a fourth reason must never be lost sight of. This fourth reason may well be referred to as the variations in Nature herself. Some land is most useful for the production of wheat, some for the production of cotton, and some land is naturally more fertile than other land. This natural adaptability has been capitalized and will be capitalized in the future. All of these reasons for wishing to own land, and added to these the desire for a home and a capitalization of the possibilities of the future, have become stronger in recent years.

Going one step further, I believe that the statistics collected by the Bureau of the Census in 1900 and in 1910 give a basis for deciding whether the higher value of crops per acre devoted to crops was due to the fact that more goods were produced on the land in use, or to a higher price paid for the goods which were produced. No prior Census reports give a basis for such a study, and even the reports for 1900 and 1910 do not give a basis for a complete analysis of this subject, nor is the basis sufficient to state absolutely the extent to which each of these forces was an influence. I believe, however, that figures can easily be presented which show that the movement during the last decade has been almost entirely a change in the price received by the farmer for his goods rather than an increase in the quantity of goods produced. This is an important feature of the new century movement.

What I have shown has been in the nature of an explanation of the rapid increase in the value of land and farm property generally. So far, no attempt has been made to prove that the increase in the average value of crops per acre was due to a change in the price of the product rather than to a change in the amount produced. In order to show this we will pass from a study of the acreage of crops and the relationship existing between acreage and value, to a study of the production together with the relationship between quantity produced and value. The most important group of crops is the general group designated as "cereals." Considering this as a whole, we find that whereas there was an increase of only 1.7 per cent in the number of bushels produced there was an increase of 79.8 per cent in the value. Clearly the increase here is due almost entirely to the increase in the value per bushel, not to any material increase in production. Turning our attention now to individual cereals, we find that there was an actual decrease in the quantity of corn produced of 4.3 per cent, yet at the same time an increase in the total value of the corn crop of 73.7 per cent. There was an increase of only 6.8 per cent in the quantity of oats produced, and yet there was an increase of 91.0 per cent in the value of that crop. Likewise the increase in the quantity of wheat produced was 3.8 per cent, whereas the increase in the value was 77.8 per cent. Without going into the same detail, it is sufficient to notice that in every other class, — barley, buckwheat, rye, kafir corn and milo maize, and rice, — the increase in value was much greater than the increase in quantity produced. The same thing is true in the case of such minor grains and seeds as dry edible beans, dry peas, peanuts, and flaxseed.

Turn now to other cases. For another crop of extraordinary importance, — that of hay and forage, — we find the same general story. There was an increase of 23.0 per cent in the number of tons produced, accompanied by an increase of 70.2 per cent in the value of the crop. The quantity of tobacco increased 21.6 per cent while the value of the crop increased 83.0 per cent. An increase of 11.7 per cent in the quantity of cotton produced was accompanied by an increase of 117.3 per cent in the value of the cotton crop. It is unnecessary here to list all of the farm crops which I have considered. Suffice it to say that in every case where the quantity of crop and value of the crop have been reported I have found the same tendency. It is worth while to note that in this study it is possible to make comparisons in the production of fruits and nuts. The quantity of small fruits decreased during the decade 7.9 per cent, while the value increased 19.8 per cent. The quantity of orchard fruits increased 1.8 per cent, while the value increased 68.2 per cent. Grapes increased 97.6 per cent in quantity but only 56.3 per cent in value. This item, however, needs explanation before it can be accepted. At the Census of 1900 the farmers were instructed to report the value of grapes in their natural form whenever they were disposed of in that form; but whenever they were disposed of in the form of dried grapes or raisins, or in the form of wine or grape juice, the reported value should be the value of the finished product rather than of the raw material. At the Census of 1910 the farmers were instructed to report in all cases the value of the grapes in their original form. The increase in the quantity of nuts produced was 55.7 per cent, whereas the increase in the value was 128.1 per cent.

Even if we went no further than this, there could no longer be doubt that the extraordinary increase in the total value of farm crops between 1899 and 1909 is attributable to higher prices rather than to larger quantities of the individual kinds of farm products. I do not wish, however, to stop at this point. I believe that it is possible to make an easy and almost exact calculation showing the extent to which the change in value of farm products is due to change in quantity produced and the extent to which it is due to the change in price. It is true that we cannot add together the quantities of cereals, hay and forage, tobacco, cotton, fruit, and therefore we cannot get the consolidated quantity by any process of weighting the units of measure. But it is possible to secure the average value per unit in 1899 for the individual crops for which both quantity produced and value were reported at both Censuses. Having secured the average value per unit in 1899 we may multiply this into the quantity of the crop produced in 1909. In this way we will secure the total value which would have been reported for each individual crop in 1909 if the average value per unit had remained the same as ten years earlier. In making this study it is necessary to eliminate certain crops, inasmuch as the values were not reported separately for a few minor crops in 1899, and further because quantities were not reported for certain minor crops at either Census. The quantity produced and the value, however, have been reported for something more than 90 per cent of all crops, as measured by value, both in 1899 and 1909.

The total reported value of the crops covered by the computation was \$2,691,978,541 in 1899. The total reported value of the same crops was \$4,934,489,828 in 1909. This is an increase of 83.3 per cent as com-

pared with an increase of 83.0 per cent in the value of all crops, showing that the crops selected not only constitute approximately 90 per cent of all crops but also are representative of the whole. Had the average values per unit in 1899 prevailed until 1909 the total value of these same crops would have amounted to \$2,962,358,477, which would have been an increase of only \$270,379,936, or 10.0 per cent. This increase, I believe, represents very closely the actual increase in *quantity* of crops of all kinds during the decade. Having in mind all of the steps which were followed it is extremely interesting to note how closely the increase in the acreage of crops with acreage reports approaches this increase in quantity of products.

It must be clear, therefore, that if only 10.0 per cent of the increase in the total value of crops can be accounted for by the increase in the quantity, that the remainder must be attributed to an increase in the average value per unit. The difference between \$4,934,489,828, which is the 1909 reported value of the crops being compared, and \$2,962,358,477, which would be the 1909 value of the crops being compared if the average values of 1899 had continued until 1909, must represent the excess of actual values of the crops of 1909 over the values of 1909 on the basis of 1899 average values. This excess amounts to 66.6 per cent and represents evidently the average percentage increase in prices. Attention is now directed once more to an earlier part of this discussion, where I called attention to the fact that the average value, per acre, of crops with acreage reports was 66.8 per cent higher in 1909 than in 1899. It must be clear from all of these figures that this increase in average values of crops per acre is due almost entirely, if not entirely, to the change in prices rather than to change in the quantities of farm products.

In conclusion, I desire to direct attention to several figures which have been given out by the Census Bureau representing the movement between 1900 and 1910. Inasmuch as the figure given above, 9.9 per cent, represents the increase in acreage of crops with acreage reports, and inasmuch as the increase in other crops must have been at approximately the same rate, it is proper to compare this item with other items of growth. Similarly, inasmuch as the figure given in the preceding paragraph, 10.0 per cent, representing the excess of the value of the crops in 1909 on the basis of 1899 values over the values of the same crops in 1899, is virtually the consolidated expression of the general increase in quantity of crops produced, it may be compared with other items which have been made public. I wish to call attention, in comparison, to the increase in the number of farms between 1900 and 1910. This amounted to 10.9 per cent. The figure was compiled independently by the agricultural division of the Census Bureau. In the same connection, I wish to call attention to the increase in the rural population — which, however, includes places under 2,500 inhabitants, in addition to the agricultural population. The increase was 11.2 per cent. It should be noted that this tabulation was carried on by an entirely different and independent organization which was in complete charge of the population returns. That division has also reported that the increase in urban population amounted to 34.8 per cent. The movement during the last decade can clearly be summarized, therefore, as follows. There has been a very decided movement towards the cities. The increase in rural population, number of farms, acreage of land in crops, and quantity of crops approximated 10.0 per cent, whereas the increase in city population

approximated 35.0 per cent. The farmers of the country have been unable to produce crops in proportion to the increased demands, their increase in production being only sufficient to supply the increased demands of the rural population and an increase of but 10.0 per cent in urban population. The prices of agricultural products have increased approximately 66.6 per cent, and at the same time there was an increase in the average value of crops per acre of 66.8 per cent. Accompanying this increase in the value of crops per acre (supplemented by a small increase in the quantity of land in farms and improved land in farms), farm property has been capitalized anew at a figure sufficiently high to take advantage of the changed conditions.

In the discussion, I naturally have been forced to use the figures for 1909 and 1899, since these are the only years for which definite and reasonably accurate statistics are available. The statistics for the other years are nothing better than estimates made by various individuals or government bureaus. It is best to hold to the absolute figures secured from the farmers and therefore I shall limit the study to these two years. After a very extensive study of climatic conditions and general agricultural conditions for the two years thus necessarily selected, I am ready to state my belief that they were typical or representative years, not abnormal in any material respect. In some districts conditions were exceptionally bad or exceptionally good in 1899, and the same was true of 1909. For the United States as a whole and for all crops which it is possible to bring into the analysis here presented, these years are as comparable as it is possible to find two years any distance apart.

It is true that the *hope* has been, and I believe I may say that the *belief* has been, that agriculture was increasing rapidly, if not keeping pace with the increase of population. The people of the United States have been more than willing to supply the Department of Agriculture, state agricultural experiment stations, and a great variety of agricultural schools, colleges, and lecturers with all of the funds necessary, believing that all of this pointed towards a larger production of goods as a basis for the food, beverage, and clothing supply of our people. Hundreds of millions of dollars have been expended for this purpose. It may seem that this expenditure has been in vain, since the average production of agriculture has not increased. But without it doubtless there would have been far-reaching decreases due to depreciation of the soil and failure of the farmers to maintain the average production secured when they first took charge. It is not my wish or purpose to discredit these agricultural agencies and institutions, which have been faithfully at work for over half a century. I believe thoroly in the work which they are doing, and in the high purposes which they have in mind. But hitherto the proportion of the effort expended by these agencies which has reached the actual farmer is comparatively small, and the amount absorbed by the farmers and put into practice even smaller. In other words, the work up to the present time has largely been experimental, or learning by experiment what ought to be done. Principles have then been taught in institutions to people who in turn have in mind the teaching of people to teach still other people. Up to the present time almost all of the work has been teaching various persons to teach; it has not been teaching the farmers to produce. Tho hundreds of millions of pages of literature have

been distributed among farmers, only a small percentage has actually been read, and only a small percentage of that read has been put into practice. It has taken almost all, if not all, of the education which has reached the farmers to date, to prevent any downward movement in the quantity produced per acre of land actually cultivated.

J. L. COULTER.

BUREAU OF THE CENSUS,
DIVISION OF AGRICULTURE.

ETHICAL AND ECONOMIC ELEMENTS IN PUBLIC SERVICE VALUATION

SUMMARY

A distinction between ethical value and economic value, 27. — Four theories of valuation for purposes of public regulation, 30. — I. Original Cost Theory. Its practicability, 31. — The problem how to deal with appreciation of land, 32. — II. Continuous Property, or "Antigo," Theory, 34. — Ethical and practical difficulties, 36. — III. Theory of Cost of Reproduction New, 37. — Cases illustrating its possible injustice, 38. — Practical difficulties, 39. — IV. Theory of Cost of Duplicating the Service, 41. — Cases illustrating its difficulties, 42. — No one of these theories fully satisfactory, 43. — Original Cost nearest approaches justice, 47. —; but is to be interpreted in terms of Efficient Sacrifice, 48.

IN the valuation of public service properties there is as yet great confusion as to what is meant by the word value, or rather as to which of the many definitions of that very indefinite word shall be applied to the varying circumstances and purposes of valuation work.

In the pioneer cases involving valuation the courts have, as a rule, wisely refrained from being too definite in attaching exact meanings to the word value. But as the work proceeds and grows in importance it becomes desirable that we have a clearer conception of what interpretations of value should be used in arriving at just conclusions when assigning so-called value to the properties subject to public regulation.

The value of a public service property in the strict economic sense means a price which the property would bring under a given set of circumstances. It does not establish that price or value which the same

property *should* bring, in order to meet all the requirements of justice for both the sellers and buyers. In other words, there is a clear distinction between an economic value and what may be called an ethical value.

Still more distinct does ethical value appear from economic value when we consider the valuation of a property for the purpose of fixing a return or the making of rates. In this case there is no intention of exchange of property. The question is primarily one of ethics or justice between the owners of a public utility and the consumers of its product. And in the problem of public service valuation it is neither possible nor desirable to neglect the element of justice which should enter into the determination of the values involved. The exercise of the power to fix rates or the exercise of any other power in the public regulation of the utilities is a governmental function, and being so, the very first element to be considered is the element of justice.

The conclusions arrived at in valuation cases, while generally not unjust, have been, as a rule, the result of haphazard and conglomerate methods of reasoning. They rest upon no well understood or well established principle or theory, so defining the value to be arrived at and so determining the elements entering into it as to furnish even an approximately correct guide to results satisfying the sense of justice of men responsible as Judges or Commissioners for the right solution of the problems presented to them.

The danger in the situation lies in the possibility of the rigid adoption by the courts or commissions of one of the several theories or rather methods of arriving at value which are now being presented to them. So long as none of these theories predominate,

and the courts and commissions continue to use the indefinite make-shift of rendering opinions by stating that "we must consider" this element and that element; and so long as they continue to make exceptions in the application of any one of these theories to all points of the problem involved, — so long they are in fact guided by a rough sense of justice and fitness, and the results may, as a rule, be tolerably satisfactory. But unless some guiding over-theory of ethical value is developed, it is to be feared that as time goes on one of the present existing theories of value will, by gathering gradually the strength of precedent, finally fix itself as the authority by which the value of public service properties shall be estimated. Already we can see evidence of one of the theories (Cost of Reproduction New) beginning to gain acceptance more rapidly than the others, and becoming intrenched as a precedent. Unfortunately, under close analysis this theory appears to be little suited to producing permanently satisfactory results.

In the following discussion and criticism of several theories of valuation the writer will use the names of the theories only with the meanings defined herein, and in the whole discussion he has primarily in mind valuation for rate making, or kindred purposes, as applicable to what may be called the Municipal Utilities, — Electric Light and Power, Gas, Water, Street Railways, Telephones, and the like.

The methods in use for arriving at present value of the property of public service companies may be classified under three distinct theories, perhaps four, no one of which can be applied in its purity without showing points of injustice either to the companies or to the consumers. These theories are as follows:

First: The theory of Original Cost, which, briefly stated, is that the value upon which returns may be allowed shall be the actual cost of the property remaining in the service of the public (with or without a deduction for depreciation).¹

Second: The Continuous Property theory, sometimes called the "Antigo" theory, which is really a sub-theory of Original Cost, and will be more precisely defined in a later part of this paper.

Third: The theory of the Cost of Reproduction New, which means that the company should be allowed to earn on a value (with or without a deduction for depreciation) represented by the estimated cost of reproducing, at the time of the valuation, the identical property then in the service of the public. That is, present prices to reproduce are to be applied to measure each item of value as it appears in either intangible or tangible property.

Fourth: The theory of Cost of Reduplicating the Service, which means that the value to be earned on should be the present cost of installing a plant capable of performing the same service as the one under consideration, but not necessarily an identical plant.

In the present article it will be possible only to examine some of the salient points of each theory.

I

The first theory (Original Cost) does not contemplate, as many seem to think, the taking as a basis for valuation all the money which at any time or for any purpose has gone into the enterprise. It merely

¹ Whether or not a property should be depreciated to determine the amount to be earned on in rate cases is a question. The problem of depreciation cannot be treated in this paper. The writer's views on the subject are given in a pamphlet recently published as a report to the St. Louis Public Service Commission, and entitled "Should Public Service Properties be Depreciated to Obtain Fair Value in Rate Cases?"

assumes that the basis of value shall be the actual cost of the items of equipment used and useful in the service at the time of the valuation. It also assumes that there shall be allowed, as so-called intangible items of value, such expenses incurred in organizing and establishing the business as can be shown to have been necessary, reasonable, or for the ultimate benefit of the public. And it may assume a deduction from cost to offset the depreciation which has taken place in the physical property.

The theory is an ethical one in the sense that it attempts to measure the *efficient sacrifice* which the investors have made in the service of the public. It is practical on its administrative side, in that it takes as a measure of value an actual exchange which has taken place, and uses the prices which prevailed in making that exchange. It is, in fact, an effort to reproduce the results which would show in property account today on a set of books which had been perfectly kept throughout the existence of the enterprise.

The theory of Original Cost also presents a number of advantages from the standpoint of safety to the investor. In the first place it offers stability; the investors who have placed say a million dollars in a public utility enterprise have some assurance (depreciation excepted) that they are to be allowed to continue to earn on a million dollars, provided the investment is made with good faith and reasonable judgment, and the property kept up. All risk of loss in value from fluctuations in the price of labor and material is removed. It is true that all chance of gain from the same fluctuations is also removed. But generally speaking capital, especially large capital, would much prefer safety to chance of gain at the expense of safety. If this is granted, it follows that the consumer also

would benefit by the low return at which capital could be secured.

It is sometimes urged against the theory of Original Cost that it is often impossible in practice to obtain unit costs for the time of construction of the property under consideration. This may occasionally be true, but it is seldom that records cannot be found of prevailing prices which extend over the life of most public service plants now in existence. Labor items are, of course, sometimes difficult to establish after a lapse of years, but reliable data on even this element can generally be obtained by the investigator who will take the trouble to go in detail to the bottom of the work he has in hand. It is certainly no more difficult than to estimate the present cost new of such equipment as is no longer on the market, and in itemized inventory and valuation work one of these two costs must be taken unless averages over several years are used, in which case the difficulties multiply.

The disadvantage of applying this theory of Original Cost in its purity appears at once, however, when we come to consider the item of real estate or private right-of-way. The very rapid and constant general advance in the value of real estate in this country has rendered the unearned increment a material item in the value of nearly any large public service enterprise which has been in existence even a comparatively short time. And to say that in public service properties real estate should be valued only at its original cost, while all other owners are allowed the increased value, might appear an unjust discrimination. The strict logic of the situation might, indeed, be supposed to decide that a public service company should neither suffer nor benefit by real estate fluctuations, any more than by the fluctuations in the price of labor and

material in any other part of its plant. Nevertheless, there appear to be elements of essential difference between real estate and the other forms of property which enter into public utilities.

Real estate, in American cities at least, is almost certain to rise in value as the years go by, and it can be assumed that this prospective rise was taken into consideration at the time of the original investment in the utility, and was a part of the inducement to make such investment; and therefore should be regarded as a legitimate profit at least up to such time as the first public valuation is made. This argument of inducement from pre-determined or expected rise in price as applied to real estate cannot, however, be used in regard to the investment in the equipment or buildings of a utility, for when investment is made in such property where the fluctuations in price are uncertain and generally small or compensating, the investor cannot have as a legitimate inducement anything but the hope of making a good return upon his actual investment, and the more his investment is relieved from the risks of fluctuation in price, the lower will be the rate of profit at which he will be willing to have his capital serve the public.

The writer is aware that this reasoning in regard to real estate is not by any means unassailable, and that there are many who hold that what is called the unearned increment should not be capitalized and brought into the rates paid by the public, but that the company should be allowed to realize on the increased value of real estate only when it sells it. Be this as it may, universal custom has sanctioned the allowance of the increase in value of real estate and so far there is no decision of the courts or commissions which does not recognize it. It would seem impossible in

the ordinary meaning of the word "just" to determine a just reward for a public service (and the building of a utility is a public service) unless all the conditions under which the act of service is performed are taken into account. Whether or not an assurance of a future advance in the value of real estate which existed at the time the investment was made can be called one of the conditions surrounding the creation of a property is a question which may well bring different answers from different reasoners.

II

The second theory of valuation, as I have listed them, known as the "Continuous Property" or "Antigo"¹ theory, is really a sub-theory of the theory of Original Cost. It attempts to measure accurately the ultimate cost to the investor of building a plant and establishing a business. It is essentially an accountant's rather than an engineer's method of valuation, and presupposes an accuracy and clearness of records which unfortunately are seldom to be met with in properties whose history extends back even a few years.

The theory is that from its beginning a company is entitled to earn and distribute in interest or dividends, a certain percentage upon its investment over and above all charges, including a proper amount for depreciation. If in any year it earns and distributes more than this allowed percentage, then the amount of this surplus is to be deducted from the value of the property. If in any year it earns and distributes less than this allowed percentage, then the deficit is to be capitalized.

¹ From its recognition in *Hill v. Antigo Water Co.*, 3 Wis. R. R. Com. Reports, 623.

While calculations based upon this theory may be valuable for obtaining certain data for measuring the cost of establishing a new business, yet, even assuming the correctness of the basic figures, the theory cannot justly be applied without very important modifications and limitations. The period during which a deficit may be allowed to be capitalized as cost of establishing a business must be limited to a reasonable time at the beginning of a new business. It must also be assumed that there was a reasonable demand for the utility when built, and that the property was well managed during the period of deficit.

It is evident that if such limitations to the theory are not considered, a utility might be established long before there could possibly be a demand to justify the investment, or might be built where ruinous competition was sure to take place, and that the results of such bad judgment, and of possibly long periods of bad management not easily detected might ultimately be placed as a perpetual burden upon the consumers. In short, the application of the Continuous Property theory in its purity and without limitation would amount to a guarantee of the investment by the public. In this case, all risk to the investors being in the end eliminated, the return allowable should logically be reduced to a figure somewhat approaching the ordinary return on municipal securities; too radical a step to be considered, for the present at least.

The reverse application of the theory (*i. e.* supposing the utility to have made a surplus over reasonable return) might, if applied to a company which has been very successful in the past, result in a complete confiscation of the property. This of course is merely a theoretical point, as the courts would not allow a

reduction of value on account of former profits. To go back from the period of a valuation and assume the right to deduct from capital the surplus earnings over an amount only now determined as a reasonable return is clearly an *ex post facto* proceeding, and should not be supported in any court if so presented. As the public would thus be prevented from reclaiming excess profits, the theory could be put into effect only in properties where there has been an ultimate loss or deficit below reasonable return.

The theory is founded upon ethical elements, in that it attempts to see that the investor has a reasonable return, and only a reasonable return, upon his investment from the beginning, and it might be sound theoretically, provided the enterprise has been entered into in response to a distinct and officially expressed demand on the part of the community for the building of the utility. In other words, if the community had demanded it, the community might justly be called upon to bear any losses incurred. The speculative character of a great number of public utility enterprises, especially when they were at their inception competitive, often precludes the assumption that there was even a sound economic demand for their establishment. One of the principal causes of over-capitalization of municipal utilities has been the great economic waste produced by competition, and it is sometimes claimed that the community, having permitted the waste through granting competitive franchises, should be made to assume the burden of loss resulting therefrom. Yet this can hardly be admitted as an ethical principle in valuation, for while it is true that the community permitted or sanctioned the competition, it cannot be established that there was any contemplation, either on the part of the investors or the public, of any

guarantee against loss. If indeed a utility enterprise were begun under strict regulation, it is conceivable that the Continuous Property theory might be applied, and might result in the community's receiving low rates in return for a practical guarantee of returns. But as yet the community is not prepared by the state of public opinion to make such a guarantee; and even if it were, the wisdom of such a step might be seriously questioned.

While the Continuous Property theory is founded upon ethical principles, the practical difficulties of applying it to properties already in existence and whose histories are at all complicated or whose accounts are obscure become so great as to make it very dangerous should it become established and used blindly as precedent.

III

The third theory, that of Cost of Reproduction New, is most often heard of in public service valuation. Yet when closely examined it appears the most illogical of the four. The values arrived at (before depreciating) do not represent theoretically what was paid for the different items of the property, nor when added up do they represent what anyone would give for the plant as a plant. It has been argued that Cost of Reproduction New represents in theory what a community would have to pay for a plant under condemnation proceedings. But this is not true, for the limit of the value of a plant to a purchaser, and the limit of its selling value to the owner is (leaving the established business and earning power out of consideration) what he can duplicate the service for, not what he can duplicate the identical plant for. It is seldom that a

plant would be duplicated if it were to be replaced by another one, and this is especially true of large plants which are the result of the growth of years in business.

A case in which the exact application of the theory of Cost of Reproduction New would produce a clear violation of the principles of justice is where a company in its underground construction has placed its pipes or conduits in the streets at a time when these streets were unpaved or paved very cheaply. In replacing the streets to their original condition the company would make but a small investment. Now suppose that the city, after the work of the company is done, decides to put down a costly pavement. The community pays the cost, but under a strict construction of the theory of Cost of Reproduction New, the company would claim the right to earn on the value of the expensive pavement, with the result that the community not only would make the investment in paving but would actually pay the company a return on it, in the form of rates calculated upon the value determined under this theory.

On the other hand, a considerable item of value as presented in most valuation cases is that of Cost of Establishing the Business, which is, in fact, an attempt to calculate the expense incurred in creating a demand for the product, or the deficit in just returns on the investment while awaiting the development of the business. Under the theory of Original Cost such an item might justly amount to a considerable sum. But it is evident that in many cases a duplication of the business under present conditions (as the theory of Cost of Reproduction New contemplates) would very materially reduce the amount allowable for creating demand or establishing business. Here the

theory of Cost of Reproduction New might work considerable injustice against the company.

Injustice might also result in the case of a street railway having been compelled by ordinance or circumstance to grade a street. It is plain that to lay the track today would not require such grading, and the investors would not be allowed return on money actually spent.

These are only three instances, taken from many which might arise in actual valuation work. They serve to illustrate clearly that the theory of Cost of Reproduction New neglects some of the ethical elements necessary to the adjudication of values by public officials. In fact, how can a theory of value be a just one when it is avowedly based entirely upon present conditions, and when it leaves out of account all the varied circumstances under which a set of investors may have placed their money in a public service?

It has become somewhat customary for engineers, when nominally applying the theory of Cost of Reproduction New, in practice to make use of the prices of labor and material not of the time when the valuation is made, but to average these prices for five or ten years back. This is, of course, an abandonment of the theory. If averages are taken for a period of five or ten years back, why not take the average price for the whole period during which the material existing has been installed? The use of average prices over the whole period would give rise to a new theory which might be called the theory of Average Price. It has never been advanced, so far as the writer knows, in a valuation case under its proper name, altho approaches to it are, as stated, often used under the name of Cost of Reproduction New. Such an averaging of prices, as practised under the name of the theory of Cost of

Reproduction New, does not contemplate the reckoning of prices only when the company has made purchases, but includes rise or decline of price of material owned by it whether purchases were made or not. In principle at least, it thus places the resulting averages under the influence of market fluctuations, as in such staples as copper or steel, which may have been entirely speculative and very remote from the business of the utility under consideration. If the averages were obtained by taking prices only when the company had made purchases, and if the quantities purchased had been considered, it is evident that the result would be Original Cost, *i. e.* the actual investment in the present plant, provided disappearance of property were properly charged off to depreciation.

The theory of Cost of Reproduction New has been presented to courts and commissions so frequently without there ever having been any effective analysis of its soundness, that it seems in a fair way to be generally adopted. If it should finally become, by force of precedent, a general rule in the valuation of public utilities, it is to be feared that the future investor may find that he has been led into a position where he can have no clear idea of the length of time during which he is to be allowed to earn on his actual investment. In case of a long period of low or declining prices, investments in such plants as gas and water works, where the property has a long wearing life, may take on an element of increased risk which will be disadvantageous both to the investor and to the consumer. The theory is staunchly defended in name by many who have had the opportunity to do actual work in public service valuation, especially among the representatives of the companies. But nearly every one of its defenders who knows anything about

the real work will make so many sensible exceptions to the application of the pure theory, that it will become evident that what he is defending is not the Cost of Reproduction New theory at all. His method of working may be good and rational; he has simply applied the wrong name to it. But it must be borne in mind that the courts generally have not the opportunity to understand the full scope of the problem and the theories underlying it, and that mere words used in court decisions are powerful forces for the future. Those engineers and commissions who are using the term Cost of Reproduction New to define their work (which may be good) are risking the final establishment of a governing theory which they do not really intend to put forward. Taken for what its name means and in the sense in which court decisions may come to make it mandatory, the theory is lacking in ethical elements. It cannot be said to be good in logic or in economics.

IV

The fourth theory of valuation, Cost of Duplicating the Service, is that which should be and naturally would be used by an engineer in advising a client contemplating the purchase of a given plant. It seems obvious that a plant, leaving the established business out of account, cannot be worth more to a purchaser than the sum for which he could erect an entirely modern plant of equal durability, efficiency, and capacity. Yet this theory is not used or given much weight either by the commissions or the courts in cases involving the valuation of public utilities. Its application, especially to rate making, would be harsh and drastic and would leave out of account some of the essential elements of

justice toward the man who has placed his money in the public service.

Suppose, for example, that a company has been compelled by law to place its wires under ground at a time when prices for such work were at a very high point or at a very low point. Does it not appeal to the simple idea of justice that if the company is compelled to pay the high price it should be allowed to earn a return on its investment made under compulsion and without an opportunity for its officers to use their judgment; and is it not equally just that if this compulsory investment is made at a time of low prices, the community should reap the benefit of an advantage due principally to good fortune and not to any extraordinary wisdom on the part of the company? The same line of reasoning will apply to other instances of construction when, as is often the case, an investment is compelled by circumstances and delay is next to impossible.

These arguments may also be used as against the theory of Cost of Reproduction New. In both cases the impossibility of attaining justice is due to the fact that neither of the theories, if adhered to, take into consideration the past history of the enterprise involved. An ethical value cannot be arrived at without considering the past. Taking present value in a strictly economic sense, neither the Original Cost of the plant nor the present Cost of Reproduction New would seem to be as logical as the theory of Cost to Reduplicate the Service. In public valuation work, even if the theory of Cost to Reduplicate the Service were just, it would be impracticable on account of the impossibility of attaining agreement between engineers as to the specifications and cost of the hypothetical plant.

This review of the various theories of valuation shows that none of them can be applied in its purity without considerable violation of ethical principles or without encountering insurmountable practical difficulties. A study of all four of them shows, however, that Original Cost, as herein defined and perhaps modified in respect to real estate, presents many advantages over the others, both as to ethical results and as to ease of application. It has in addition the very great practical advantage of being the only theory which lends itself readily to the necessary plan of keeping valuations of public service properties always up to date by proper accounting. It should be the aim of every Public Service Commission to have finally on its records, for the instant use of the law making or taxing arms of the government, a valuation brought down to the date of its use. After a complete detailed inventory and appraisal is made, the only practicable method of keeping the valuation up to date is by adding the cost of each new purchase of property and deducting the cost of those items which are discarded, together with proper treatment of the depreciation account. In other words, Original Cost must be used in making the necessary charges to the property account. It is evident that if any other theory than Original Cost is used in making the original appraisal by inventory, we will have in the end a valuation which is an irrational conglomerate of theories without ethical reasons for such conglomeration. The only other alternative would be a complete new appraisal every time the value of a plant is to be ascertained.

The trouble with the theory of Original Cost is that it does not satisfy the idea of attaining present economic value. On the other hand, the theory of Cost of Reproduction New, while superficially or rather in mere

name it satisfies the idea of present economic value, does not in reality come any closer to present values than Original Cost. As applied in its strictest sense it would result, as stated before, in the mere summing up of the present cost of the various items and might be far from the value of the plant as a whole. As applied by taking five or ten years' average prices it may even be as far from using present prices on the separate items as would be the theory of Original Cost.

The statement that the "trouble" with Original Cost is that it does not satisfy the "idea" of present value, means only that there exists a generally adopted but essentially superficial idea that we *should* try to get present economic value in a governmental valuation for rate making. Yet this assumption that the aim in rate cases is to attain present economic value is entirely superficial and erroneous, as becomes apparent at the first steps in the analysis of the work of any competent commission or court. The recognition of any circumstances of especial difficulty or especial advantage in the history of the creation of any particular property shows clearly that the real result of good work is to establish a Just Amount upon which the companies should be allowed to make returns, and not to establish a present economic value which would ignore the sacrifices of the creators of the enterprise so far as those sacrifices have been made in good faith and with benefit for the public. After all, the future is the *field of effect* of most valuation work, and even if a correct present value should be determined, can it be said, that this value would be more just in the future, or is more just now, than a value made up on an original cost to the investor of the plant and organization which is kept in the service of the public?

Unfortunately the United States Supreme Court, in the conspicuous case of *Wilcox v. the Consolidated Gas Company*, has said ¹

And we concur with the court below in holding that the value of the property is to be determined as of the time when the inquiry is made regarding the rates. If the property which legally enters into the consideration of the question of rates has increased in value since it was acquired, the company is entitled to the benefit of such increase. This is, at any rate, the general rule.

If we admit the rule here laid down and apply it to advances in prices of material, labor, and other elements in which the expectation of such advances is not part of the inducement to the investment (as is the case with real estate), we must also admit fluctuations in prices which cause a decrease in value. If this is done, an unnecessary and undesirable element of speculation is introduced into public service properties on account of the very fact of governmental valuation, and the risks so created will in the end be reflected back upon the consumer in the shape of the higher rates of returns which can justly be demanded by the investor on account of such risks.

At present we are going through a period of re-adjustment of values on account of the presence or imminence of public valuation, and this period necessarily brings much uncertainty as to investments in public service properties. Yet the true aim of regulation is to bring about eventually a condition where, so far as is possible, all risk and all speculation will be removed from the enterprise, and there will be a clear, lasting, and dependable understanding between the consuming public and the investing public. Such a desirable condition can be attained only by making it understood that investors are to be allowed returns upon what they properly invest and keep invested in the service of

¹ 212 U. S. 19.

the public, and not by making their property the subject of future fluctuation in prices of labor and materials over which they can exert no control.

It is evident if this opinion of the Supreme Court is strictly adhered to, it could be claimed that there must be an entire revision of all prices entering into a valuation each time a rate is changed, and the opportunity is offered for any pedantic judge in a lower court to throw out any rate work even of the ablest commission, on the ground that present prices have not been used throughout. To use present prices throughout is impossible where, as is often the case, work of the character under consideration is no longer done. In fact, it is practically impossible, in making up a detailed appraisal of any large property, to adhere strictly throughout either to present cost prices or to original cost prices. Yet this condition applies as a rule only to matters of minor importance, while the adoption of a correct theory to be followed as closely as possible will often be of great importance in admitting or rejecting items of large value, especially where the so-called intangible assets are concerned.

When it is understood that to attain a true present economic value of a property is next to an impossibility, then it is at least to be hoped that, for the sake of stability in values, elimination of risks, and the establishment of clear understanding as to the future treatment of properties under governmental valuation, all parties, including the companies themselves, may accept some controlling theory which will subordinate the idea of economic value to the higher principle of ethical value and to the very valuable "commodity" of knowing what to expect.

It is obvious that ethical value and economic value are not necessarily the same thing. But there is a

distinct and to a certain extent a logical point of view from which it is assumed that the economic value of a public utility property is its value once for all, and that in the making of a valuation the owners of these properties should not be placed upon any other plane than the owners of any other properties. It would follow from this that the present value of a public service property can only be the price at which that property would sell for today. But immediately the principle of public regulation of rates is recognized, it is evident that this regulation will affect and even control the economic value of the property; and if an ethical element based upon the sacrifices of the investor is not introduced, the public could, theoretically at least, make the rate anything it wished, and the value of the property would then be anything it wished, without regard to results which would be grossly and patently unjust.

The analysis submitted in this paper indicates that the theory of Original Cost gives the nearest approach to just results. And it appears in fact that in considering questions of justice we are generally forced back to what actually did happen in the production of any property; this means Original Cost. Yet this, too, cannot in many cases be applied rigidly; and should it become obligatory by court decisions, might prove only less hampering and harmful than the other theories.

The need is for some guiding over-theory which will guard against ethical errors and show where the different economic elements can safely be used or rejected. The courts and the commissions seem at present to be giving due weight to the ethical elements involved in the valuation cases presented, and it is possible that the better equipped commissions, if left to them-

selves, would continue to do so. From the nature of its work a good commission is a specialist in valuation, and should know all sides of its business. A court, from the varied character of the work required of it, is at best but an amateur in a specialized field and there is danger at any time that a judge in some high court, in a well intended effort to be somewhat specific in his definition of value, may fix upon us limitations which will materially hamper efforts to attain results just both to the companies and the public.

In searching for a guiding ethical over-theory of value for use in making valuations of existing properties, there presents itself for consideration an adaptation of the socialistic theory of value, — value measured by the sacrifice of the producers. The pure socialistic theory goes back to the sacrifice in the way of discomfort and physical effort made by the workman, and is, of course, entirely subversive of economic values as at present established. But it seems quite possible that an adaptation of the theory, which would only go back to the money sacrifice of the investor, might be found a workable theory for our problems of valuation and rate making. It would, however, be necessary to limit the theory to a consideration only of the *efficient* sacrifice made in the service of the public. Without the limiting word "efficient" the theory would run wild and admit of all kinds of abuse.

It may be objected that results based upon Efficient Sacrifice may not be a "value." The term value is an unfortunate one when used in naming the ultimate object of Public Service Valuation work; only if qualified as Ethical Value does it express with any accuracy the result which should be desired. It would be much better if the object of so-called valua-

tion were described as the "Just Amount" to be earned on, or the "Just Capital." But it is probable that the idea of value is too intimately connected with the work for the use of the term ever to be eliminated.

The statement that the returns to be earned by the public utility companies should be so adjusted as to give a just reward for Efficient Sacrifice in the service of the public, is probably nothing more than the crystallization into a phrase of what has been the aim of the courts and commissions which have had the elements of justice in their minds when dealing with questions of valuation and rate making. Nevertheless, the statement in succinct form, if adopted as the definition of an over-theory, might serve to make questions of strictly economic value subordinate to the ethical questions of justice, and might possibly prevent many errors which are sure to occur in case any strictly economic theory becomes controlling.

JAMES E. ALLISON.

COMMISSIONER AND CHIEF ENGINEER,
PUBLIC SERVICE COMMISSION OF ST. LOUIS.

SOCIAL DENMARK¹

SUMMARY

Economic characteristics of Denmark, 50. — Co-operation in retail trading, 52. — Trade Unions, 55. — Insurance against sickness, 58. — Unemployment insurance, 60. — Compensation in case of accident, 64. — Old age pensions, 64. — Problems still unsolved, 65.

ALTHO the smaller nations are usually at a disadvantage politically and economically, they enjoy in some ways a favored position when compared with their greater neighbors; they are less difficult to stir to action. Any change proposed for a nation of only four millions is easier to carry through than one which concerns forty millions. Any scheme of social or political reorganization which is to be applied to but a very limited population is incomparably easier both to plan and to put into operation than a scheme which has to take into account all the peculiarities of the elements of a great nation.

Such an advantageous position the Danish nation has utilized for its social progress during the last forty years. Its 2,750,000 of population contain no differences as profound as those which split up the great nations into smaller groups, animated by conflicting interests and ideas. Danish manufacturing is of recent origin and minor importance. Not only are exports of manufactured goods small, but the home market is only partly supplied. Agriculture, altho

¹ This paper has been put at our disposal through the kindness of the Danish Legation at Washington. It is gladly published, in order to bring to the attention of American students the remarkable social development of Denmark. — ERRORS.

engaging directly not quite half the population, is the principal source of the nation's wealth, and agricultural products form the great bulk of exports.

Danish agriculture, however, is so highly specialized and organized that it is much more like the great modern industries than like old-time farming. Its products are such as demand a vast amount of labor, much of it highly skilled; and the high costs of production, leaving only a narrow margin of net earnings, necessitate a strict economy and constant watching of the market. As, furthermore, great farms are uncommon and most of the land is split up into small plots, owned and worked by the peasants themselves, it is evident that there can be no room in Denmark for a backward and inefficient rural population. The Danish peasantry are put to a severe test by existing circumstances, and only a thoro organization and a high educational level can ensure their success.

It is remarkable that the system of small ownership, which elsewhere has resulted in a petty individualism, has, in Denmark, not only raised a population of conscious and intelligent peasants, but has also been the basis of a co-operative movement stronger perhaps than that of any other country. Among the factors contributing to this result may be mentioned the successful educational system of Denmark, especially the Popular High Schools, where very many of the young peasants of both sexes spend several months securing a mental and moral training which leaves its stamp for life. But when one sees that the Danish working people of the towns, who live under altogether different circumstances and receive quite a different training, nevertheless display the same capacity for voluntary organization, — brought to bear, tho it is, upon other problems than agriculture and dairying, — one inclines to think

that the Danish people are endowed with a peculiar faculty for spontaneous co-operation and self-disciplined organization.

The following pages give a short account of the different forms which this natural tendency has taken in town and country. In order to complete the picture of contemporary Danish social life a few remarks will follow concerning domains which the State has had to enter in order to encourage private efforts and to carry out tasks which private initiative had failed to accomplish.¹

The co-operative principle was first applied in Denmark by some small societies of consumers, who, imitating the celebrated Rochdale Pioneers, started buying goods in common and distributing them among their members. Such societies spread rapidly, organizing almost always on the same business principles. The members contribute only small amounts, but are jointly responsible for the debts of the societies. Their goods are sold for cash and at the current retail prices. Afterwards the profits made through wholesale purchases are divided among the members according to the amount of goods furnished to each.

At present there is scarcely a village, however small, which has not its co-operative society. In all there

¹ The statistics quoted in this paper are compiled, for the most part, from the statistical publications of the Danish Government, especially from the Danish Statistical Yearbook ("Statistisk Aarbog, udgivet af Statens Statistiske Bureau") whose contents are in Danish and in French.

Almost nothing has been written in America or England on Danish social life. The 24th Annual Report of the Commissioner of Labor, 1909, gives a general survey of social insurance in Denmark. On special topics I may further mention: Rider Haggard: *Rural Denmark and its lessons* (London, 1911); and, as a book which thoroughly treats Danish unemployment insurance, Gibbon: *Unemployment Insurance*, London, 1911.

In French there are some official publications on social and economic progress in Denmark: Rudolf Schou, *L'agriculture en Danemark*, Paris, 1900; *Le Danemark: état actuel de sa civilisation et de son organisation sociale*, Copenhagen, 1900; *Assistance et prévoyance sociale en Danemark*, Copenhagen, 1910.

are about 1,300, with a total membership of almost 200,000 and an annual turnover of \$17,000,000. Most of them have combined in order to carry the co-operative principle to a higher pitch of efficiency: they get their goods, not from a wholesale merchant, but through a National Co-operative Union which yearly supplies goods to the amount of \$12,000,000 produced to a great extent in its own factories.

This movement has by far its greatest strength in the country. In Copenhagen and the other towns it is comparatively weak. But quite recently the trade unions have taken the problem up, and they may start a campaign among industrial workers for the creation of co-operative societies.

As such co-operative buying societies soon proved a decided success with the Danish peasants and acquainted them with the principle of co-operation, it was very natural for them to conceive the idea of trying to organize agricultural production and the sale of produce in a similar way. In spite of the much greater difficulties which attended this enterprise, the attempt succeeded. When in the seventies and eighties Danish agriculture abandoned wheat growing and turned to dairy farming, this revolution, — as it may well be called, with such astonishing swiftness did it come, — was to a great extent brought about through co-operation. The farmers, who had hitherto produced butter only in small quantities and of a mediocre quality, created dairy societies that built butter factories, engaged experienced dairymen and undertook to turn the milk from their members' farms into butter. These societies were administered by the farmers themselves, each member having one vote, whether he owned one cow or a thousand. As they are based on the joint responsibility of the mem-

bers, the societies can work with a very small capital, and almost the whole of the profits, after deducting the running expenses, can be divided among the members according to the quantity of milk supplied by each of them. Through experiments and by applying the most advanced scientific methods the dairies soon succeeded in producing butter of choice quality. In order to find a market abroad for their products the dairy societies established export societies which could undertake regularly to supply great quantities of butter of a standard quality. These societies were organized on the same principle: each factory receiving its share of the proceeds of the sale according to the quality and the quantity of the butter furnished by it.

At present there exist in Denmark 1,150 co-operative dairies, which turn into butter the milk of four-fifths of the cows of the country. In 1909 they paid back to the farmers \$59,000,000, of which \$9,000,000 was clear profit.

Naturally the dairy societies take great interest in the quality of the live stock of their members. The productiveness of the cows is exactly tested from time to time, and advice is given as to the feeding and breeding of the cattle. Through the societies any agricultural progress spreads quickly all over the country. There exist also a great number of strongly organized agricultural societies, of which most peasants are members and through which they are kept informed of the latest technical improvements.

Little by little co-operative methods have come to prevail in almost all branches of Danish rural industry. Co-operative slaughter houses have been established and have secured a good market in England for Danish ham and bacon. In 1909 they killed 1,360,000 hogs and 26,000 head of cattle, and paid out to their mem-

bers a total amount of over \$24,000,000. The collecting and exporting of eggs has also been co-operatively organized, and thanks to a very rigorous control, — each egg being stamped so that members who supply bad eggs can easily be found out and fined, — the Danish egg export is increasing rapidly, and a yearly total of 33,000,000 dozens has already been reached.

It would require too much space to enumerate all the forms under which the co-operative principle is applied in Danish agriculture. Whenever the farmers feel the need of undertaking anything on a large scale they turn to co-operation. They form societies for breeding cattle, for buying seed and fodder, as well as for procuring machinery too big and too expensive for one farm.

Besides securing clear economic advantages, the administration of co-operative societies, together with the institutions of local self-government, has been an admirable school for the Danish peasant. It has developed his intellectual and moral qualities and has fitted him for the very active part which he has now, for a long time, played in the political life of the nation.

As already stated, the natural aptitude of the Danish people for spontaneous organization has made itself manifest in the towns just as in the rural districts, save that, because of different conditions, it has assumed correspondingly different forms. Danish trade unionism, like Danish industry, is of comparatively recent origin: both date only to the beginning of the seventies. Tho at first the unions were crushed down by the authorities as revolutionary, they soon recovered, and since have developed rapidly and regularly. From the outset they have been professedly socialistic; and tho their original rigid Marxism has been gradually

softened to a moderate Reform character as their membership increased, they have never given up their allegiance to the socialistic doctrine. Their intimate relation with the Social-Democratic party is emphasized by the rule that a seat on their central committee shall always be reserved for a member of the executive council of the party.

Danish trade unions are built up on a very thoro and efficient plan. The units of the system are the small unions comprising the workmen of a certain trade in a certain locality. Most of these unions are so small that an effective control of the members is very easy. All the unions of a town are generally united in a trades council, working for special local purposes. At the same time, however, there exists in most trades a national Federation linking all the local trade unions. And the majority of these federations are members of the great central body, the Amalgamated Trades Federation. By this device about one-half of the Danish workmen are massed together under the leadership of a single executive body, whose chairman is certainly one of the most influential men in the country.

In 1910 there were in Denmark about 1,500 trade unions, organized in about forty-five federations and having a total membership of 122,000. Forty of these federations, with a following of 102,000 workers, belonged to the Amalgamated Trades Federation. For the sake of comparison it may be mentioned that the industrial workmen of Denmark number in all about 210,000; there are also 67,000 women. Even of the women a considerable number are organized. Evidence that the unskilled workmen also possess remarkable capacity for organization is the fact that the Federation of Laborers, composed of such workmen, numbers about 28,000 members.

In face of this army of well organized and well disciplined workingmen stands a body of employers, much less numerous, of course, but just as firmly united. There is a central organization which assists and controls federations of employers in the different trades. The creation of this powerful body gave the signal for a great industrial war in which 40,000 workmen were locked out for about four months. The agreement reached when at last the two central organizations came to terms still holds good as the constitutional law regulating the relations between the employer and the workingman in Denmark. It laid down definite regulations for collective bargaining, for giving notices of strikes and lock-outs, and for other industrial proceedings. And the State, in order to assist in enforcing this agreement, has established a special court composed of employers and employees and a jurist as umpire, having the object of interpreting collective contracts and inflicting fines upon organizations which violate them.

No sort of arbitration, whether arbitrary or compulsory, in industrial pursuits, has been set up by the Danish government. But it has appointed an official "conciliator," who is authorized to call the parties to such disputes before him, ask full particulars as to the points in dispute and offer his mediation. He can give no binding award, can only assist the parties in reaching a compromise; or by publishing the conclusions of his impartial investigation, he can bring the pressure of public opinion to bear on the recalcitrant party.

Danish trade unions have by no means limited their field of operations to offensive and defensive warfare against the employers. They have also

worked to a great extent as aid societies, assisting members in need on account of old age, ill health, or lack of employment. In the course of time, however, these functions have largely been taken over by special organizations, some of which are still often very intimately connected with the unions from which they have originally sprung.

Voluntary sickness clubs had reached a considerable development among the working people in town and country before the government had ever given any thought to the problem of insurance against sickness. It was natural then that the State, in first grappling with this problem, did not follow the German example of compulsory insurance. The Danish government preferred to further the development of the existing spontaneous organization by means of state grants to the sickness clubs and encouragement to their members. The act of 1892 prescribed that all sickness clubs which complied with certain conditions laid down in the act could obtain recognition from the state and thereby obtain the right to subsidies from the exchequer and from municipal funds. Following are the main conditions for securing this recognition: the club shall be limited either to a certain locality or to a certain trade; it must have at least fifty members, who shall be between fifteen and sixty years of age and shall be workingmen, small artisans, tradespeople, small farmers or agricultural laborers. Children under fifteen years are insured with their father.

The recognized sickness clubs render free medical and hospital treatment and a daily money benefit. To members under eighteen years the benefit cannot be less than eleven cents; for adult men and women it may be less or even nothing. The daily benefit is never to exceed two-thirds of the usual wages of

the insured person. The maximum period for which it is given must be at least thirteen weeks a year, but for the first three days of sickness no pay is due. Most clubs secure to their members much greater advantages, especially in the form of money benefit. But when they comply with the above minimum rules the clubs can claim a state grant of fifty-two cents per member and one-fifth of the premiums. Besides, the municipalities grant to the sickness clubs treatment for their members in the municipal hospitals at half pay or even less; and they grant other advantages also.

In order to encourage people to join the sickness clubs the law further provides that when at the end of thirteen weeks the cash benefit ceases, the members are entitled to poor law relief for a like period, without losing any of their civic rights.

The clubs recognized by the state retain complete autonomy. They are administered by their members through a committee chosen from among themselves, with the provision that an inspector appointed by the state must see that the clubs are always solvent and that the conditions for obtaining state grants are constantly observed. But of course the inspector can assist them in many ways through his legal and financial experience. Each year he calls a conference of delegates from all the clubs to discuss matters connected with insurance against illness. In addition, he is the president, *ex officio*, of a board of nine representatives of the club. This board has proved very useful in controlling and developing the organization and keeping it to the terms laid down by law.

Most of the sickness clubs have joined a National Federation, which makes it possible for the insured person who moves from one part of the country to

another to be transferred from one local club to another without loss of any acquired rights. In 1910 there existed in Denmark 1,500 recognized sickness clubs with a total membership of 667,000. Their total income amounted to \$2,000,000, of which the members paid \$1,290,000 and the state \$550,000. They spent \$600,000 in benefits, \$170,000 in hospital treatment, and \$715,000 for medical attendance. Tho it appears from these statistics that a fairly high percentage of the population have joined the clubs, it must be confessed that hitherto these have come chiefly from the well-to-do portion of the working classes. Those who would most sorely need assistance in case of illness often do not see their way to pay the subscriptions. However the question of how to extend the boon of insurance against illness even to the lowest classes of the Danish working people, without giving up the present non-compulsory system, is now receiving careful attention from Danish social reformers.

More than half the sickness clubs are closely connected with special voluntary associations which undertake, against a small premium, to pay the burial expenses of members who die. These associations, which count in all about 370,000 members, are also placed under the supervision of the inspector of the sickness clubs. Many of them have reinsured their risk through the medium of the National Federation.

The problem of insuring against unemployment is one of the last problems with which social reformers have grappled, as it is, by common consent, one of the most difficult. Local attempts were made by municipalities, but these generally failed, and matters went from bad to worse. One cannot but admire the courage shown by the Danish Congress when in 1907

it adopted the first national scheme of insurance for the unemployed ever planned. The whole scheme might have proved abortive, had not the materials on which to build the system been at hand. The voluntary sickness clubs already embracing a large part of the population, pointed to the method; that is, the encouragement by state grants of the creation of autonomous associations for insurance. It was feared, however, that the scheme might not succeed without some sort of compulsion; there was evident danger that only the second-rate workers, those most likely to get out of work, would join the associations. This difficulty, however, could be overcome, as had been proved, by the insurance for the unemployed created by many of the trade unions; these bodies were able to compel all their members to become insured. And the state, by encouraging the private efforts of the trade unions, might promote the creation of an effective system of insurance for the unemployed, while avoiding the odium of state compulsion. This was the sagacious plan embodied in the act of 1907. The state put only one condition upon subsidizing insurance started by the trade unions; that hereafter the insurance should be carried on by autonomous organizations, existing for the purpose. If the grants had been paid into the general funds of the trade unions they might have been misappropriated for strike pay and the like. As a matter of fact the new associations are very often closely connected with the trade unions from which they have sprung. They often have common offices and the same men are their executives. The employers are not bound to contribute to them and consequently have no voice in their administration, and the state limits its supervision to auditing the accounts and seeing that the law is observed.

The scheme has proved very successful. The trade unions easily understood what an advantage it would be to them to be relieved of at least a part of their expenditures for unemployment, and they hastened to avail themselves of the opportunity. In 1911, — after a trial of only four years, — there existed fifty-one associations of this kind, counting 105,000 members. This means that more than two-thirds of the industrial workers of Denmark are now insured against unemployment. And it is well worth noticing that many women — more than one-fourth of those employed in industry — have joined these associations.

The funds of the societies are raised, — as already stated, — by subscriptions from the members and by state and municipal grants. The subscription of each member averages a little more than twenty-eight cents a month. The subsidies from the municipalities are optional, but the state grant is fixed at half the amount raised from the other two sources. Out of these funds it has been possible to allot to each member unemployed a daily benefit varying from fourteen to fifty-four cents, but never to exceed two-thirds of the average wages in his trade. Most of the societies, however, do not pay benefits to any member for more than seventy days in a year. According to the law those unemployed because of a strike or lock-out are not eligible for assistance, nor is any member who refuses work of a suitable kind.

Some of the societies have created labor exchanges. It is now proposed to establish, in addition to these, a national system of labor exchanges to be run by the municipalities under control by the state. Such a scheme will, of course, be of great use to the associations for unemployment in checking any possible tendency

on the part of the unemployed to evade work as long as they can draw their insurance. It is, however, only just to add that no such tendency has hitherto needed correction, since the control exercised by fellow workmen over the work-shy seems to have been sufficient.

The rules as to state control are modelled on those which apply to the sickness clubs. Control rests in an inspector who is the chairman of an elected "board of insurance for the unemployed" and who, once a year, calls a congress of delegates from all the associations to discuss matters of common interest.

The foregoing pages have given a brief survey of what the innate tendency of the Danish people towards voluntary organization and collective self-help has wrought for the progress and well-being of the nation: how it has brought Danish agriculture to the first rank in modern Europe, and greatly augmented the productive forces of the country; how it has helped the working people in town and country to attain a fairly high standard of living, and has sheltered them against the ruinous economic effects of such constant risks as sickness and loss of employment.

It would, however, give a wrong impression of social life in Denmark at the present day if a few remarks were not added, setting forth what the state has done directly to solve those social problems with which the voluntary provident societies have not tried to cope. The risks against which the Danish working population is not covered by private societies are particularly the following: industrial accidents, a poor and helpless old age, invalidity due to sickness or other causes than labor accidents; and, in the case of children, the loss of their bread-winner and protector, whether father or mother.

Against the first of these dangers Danish working people are insured through a workmen's compensation act obliging the employers to pay to the workmen injured during their work a compensation to be fixed by a special board. This board is composed of representatives of employers and employees in equal number, and some members appointed by the state, one of whom acts as chairman.

Tho not bound to do so, most of the employers insure themselves against this risk through a mutual insurance society recognized by the state. The workmen's compensation act now also provides for agricultural laborers and sailors. The fishermen, who generally have no employer but work individually or in small groups, can insure themselves at a very low premium in a mutual insurance society, the possible deficit of which is covered by the state.

The Danish scheme of old age pensions was somewhat of an experiment when first voted in 1891. But its success has been demonstrated not only by its beneficial results in Denmark, but also by the fact that it has been a model to other countries, notably Great Britain. Its general aim is to provide an independent and comfortable period of rest for old people of respectability who are no longer able to earn their living, and are unwilling to apply for poor law assistance, which entails the loss of civic rights. Everything is done to mark the difference between the old age pension and the common poor law relief.

The conditions of eligibility for a pension are as follows. The person must be at least sixty years of age and unable to earn a living; must not have committed any crime or misdemeanor; must not be indigent through his own fault (dissipation or gifts to relatives or

others); and must not have received public assistance for five years preceding. However, public assistance received in case of illness does not render one ineligible, neither does the possession of a small sum of money or a yearly income of less than twenty-six dollars.

It is left to the town authorities to decide who are qualified for a pension and to fix its amount in each case according to the circumstances. In order to encourage economy the state refunds only one-half of the expenses; the other half is borne by the municipal funds.

The number of pensioners has been increasing rapidly. At present about twenty-five per cent of the men and thirty-six per cent of the women above sixty years draw pensions. The amount of these, varying a great deal, of course, with the cost of living, ranges from fifty-six dollars a year in Copenhagen to only thirty dollars in the rural districts.

In order to secure to the coming generation a healthy infancy a bill has recently been voted by the House of Representatives giving to widows or widowers in need the right to claim assistance from the state for protecting their children until these are able to provide for themselves. It has not yet (1912) been enacted, the Senate having rejected it, mainly for financial reasons.

Another great risk the Danish working classes are not yet insured against, the risk namely of becoming incapacitated through incurable disease or through non-industrial accident. Several years ago a commission was appointed to inquire into this problem. The present Minister of the Interior appears, however, to favor a scheme of compulsory insurance which should also comprise insurance against old age and

thereby relieve the state of part of the burdens of the present old age pensions. As this plan will probably meet with considerable resistance from different quarters, the missing link in the Danish system of social insurance may still be long in coming.

This survey has been brief. Yet it has not been in vain if it has shown that the Danish people have successfully availed themselves of the advantageous conditions created by their small population and by its high moral and intellectual standard. Surely the co-operative and provident institutions of Denmark stand high among those of European countries.

P. SCHOU.

SPECIALIZATION IN THE WOOLEN AND WORSTED INDUSTRY

SUMMARY

The different kinds of specialization, 68. — The woolen and worsted processes described and compared, 69. — Relative growth of the woolen and worsted branches, and their geographical distribution, 70. — Census figures showing the degree of specialization in each branch, 72. — Discussion of these figures, 74. — The organization of the industry in the United States compared with that in England, 78. — In France, 81. — In Germany, 82. — The reasons assigned by Professor Clapham for greater specialization in the worsted than in the woolen branch, 84. — Worsted fabrics and yarns "standardized"; woolen fabrics and yarns of such varying character as to preclude standardization, 86. — Other reasons for greater specialization in the worsted branch, 88. — The reasons why wool-combing is not so highly specialized in the United States as in England, 90. — The tendency toward greater specialization in wool-combing, 94.

THE woolen and worsted industry offers a most instructive field for a study of industrial organization and specialization. The term "woolen" is used herein-after in its narrow sense to designate a particular class of fabrics, often called "carded-woolen," to differentiate them from "worsted" fabrics which are manufactured by a somewhat different process, and usually in a separate set of mills. Altho the manufacture of both woolen and worsted goods is commonly thought of as a single industry, the line of demarkation between the two is sufficiently clear to enable the Census Bureau to compile separate sets of statistics for each. There appears to be ample justification for thus keeping them apart, inasmuch as there are pronounced differences in the character of materials used, the kinds of fabrics produced, and in the respective organizations

of the two branches. It is these differences in organization, in so far as they relate to specialization, which are the subject matter of the present paper.

The term "specialization" is sometimes, tho not properly, applied to the minute subdivision of processes, or "complex division of labor," within a single factory. It has a commonly accepted usage in two other senses: first, the limitation of the output of a mill to one particular kind or grade of goods, such as worsted coatings, cotton-warp dress goods, or all-wool blankets; and second, the subdivision of successive processes of manufacture between different mills, as for example where one mill combs, another spins, and another weaves. The first kind may be called horizontal or parallel specialization, because the processes occupy the same plane in the industrial scale from raw material to finished product. The second may be called vertical specialization, in that the various operations follow each other in an ascending scale, the product of one factory becoming the raw material of another. It is the latter kind of specialization with which this discussion is primarily concerned.

The considerations upon which the possibility or desirability of specialization in a given industry depends are either commercial or technical. Commercial considerations are such as the extent of the market, homogeneity of product, proximity of plants to each other. The technical considerations have to do with the intricacy of processes, capital requirements, size of the producing unit, and other matters which concern economy of operation. A third possible consideration is the history of the industry in question; established custom may retard the re-organization of businesses even when commercial and technical changes tend to make such re-organization advantageous.

A brief survey of the technical differences in the manufacture of woollens and worsteds is necessary to a proper understanding of the degree to which the two branches are specialized. Altho the worsted branch differs from the woollen to some extent in all the processes, the most marked differences occur in the early stages of manufacture, *i. e.* in the operations preparatory to spinning. The spinning itself is usually done on different kinds of machines, the mule (spindles) being used in making woollen yarn, and cap spindles in making worsted yarn.¹ The same loom may be, and often is, used in weaving both woollen and worsted fabrics, while the dyeing and finishing operations, altho more elaborate for woollen than for worsted goods, have little effect on the organization of the respective branches.

The principal operation in the preparation of scoured wool for spinning into woollen yarn is "carding." The carding machine opens up the matted fibres, renders them light and workable, and delivers them in the form of loose untwisted ropes, ready for the spindle. The fibres when they leave the card are crisscrossed in every conceivable direction, and are spun into yarn in this condition. The yarn is consequently fuzzy, with numberless ends of fibres protruding from the surface. When such yarn is woven, the resulting fabric is covered with a nap which is often worked up in the finishing operation so as to obscure or entirely obliterate the weave, as in broadcloths, heavy overcoatings, and blankets.

The principal feature which distinguishes worsted from woollen yarn is that in the former the fibres lie straight and parallel, instead of crisscrossed; hence

¹ In spinning worsted yarn on the "French system," a method which has been gaining ground in the United States, mule spindles are used.

they have to be "combed," an operation more complicated than carding. In fact, most wool has to be carded before the long series of combing operations begins. The wool is then passed through "gill boxes" which gradually straighten out the fibres and lay them parallel. They are then sent through the "combing machine" proper, the main object of which is to separate the short fibres from the long. The short fibres are called "noils" and are a valuable by-product from the worsted standpoint, inasmuch as they may be recarded and spun into woolen yarn. The long fibres of combed wool are delivered in thick strands called "tops," an item that has occupied a conspicuous place in tariff discussion of recent years.

But even in the form of tops the wool is not yet ready for spinning; it has to be "drawn," *i. e.* passed through a series of machines which gradually draw out and attenuate the "sliver" until it is an already partially spun thread. Not until this operation is completed is the wool ready for the spindle which imparts the twist. Since the fibres lie parallel there are few ends which protrude from the surface of the yarn, and when woven the resulting fabric has a smooth surface with very little nap, as in the case of the well known worsted trouserings, in which the weave shows clearly. Meagre and incomplete as this description is, it is sufficient to indicate the marked differences between the woolen and worsted processes.

In the United States the woolen industry may be said to have begun when the country was first settled, whereas the worsted industry did not become established until the Civil War. In 1860 there were but three establishments making worsted goods; since that time, however, the development has been phenomenal, until in 1900 the production of worsted goods exceeded

in value the production of woolen goods. Since that date the rapid progress of the worsted branch has continued unabated, while the woolen industry has barely held its own. In 1909 the value of products of worsted mills was \$312,625,000 and of woolen mills \$107,119,000. In Massachusetts alone the worsted manufacture increased from \$51,974,000 in 1904 to \$106,099,000 in 1909; and in the same time the woolen manufacture decreased from \$44,654,000 to \$32,217,000.

As for the distribution of the two branches in the United States, worsted mills are much more localized than woolen. Woolen mills exist in nearly every state of the Union; worsted mills existed in only twelve states in 1904. The three leading states in woolen manufacturing produce only 57 per cent of the total output of the country; the three leading worsted states turn out 75 per cent of the total. In Massachusetts, Lawrence produces at least half of the total worsteds for the state; and in Rhode Island and Pennsylvania the cities of Providence and Philadelphia, with their outlying districts, produce much more than this proportion of their respective state totals. Likewise, in New Jersey, Passaic stands pre-eminent in the worsted manufacture; in New York, Jamestown; and in Ohio, Cleveland. In the woolen branch, on the other hand, no city or limited district predominates, with the possible exception of Philadelphia; and even in that city, if carpet mills and spinners of carpet and hosiery yarns are eliminated, the concentration would probably not be so marked as one might expect. The reasons for the greater localization of the worsted branch will appear in the discussion of specialization below.

The most interesting difference between the organizations of these two branches of wool manufacture is the higher degree of specialization in the worsted than in

the woolen. The typical woolen mill performs every step in the manufacturing process: it scours, cards, spins, weaves, and finishes. The ordinary worsted mill, however, performs only one or two of the important processes. Wool scouring is done to some extent in a separate set of mills, but most spinning mills scour

WORSTED MILLS CLASSIFIED ACCORDING TO OPERATIONS PERFORMED¹

Classification	Number		Per cent of Total	
	1909	1904	1909	1904
Establishments, total *	334	226	100.0	100.0
Combing Machines, total	1,925	1,312	100.0	100.0
Spindles, total	1,995,622	1,216,930	100.0	100.0
Looms, total	45,270	30,910	100.0	100.0
Establishments that comb only	4	2	1.2	0.9
Combing machines	61	25	3.2	1.9
Establishments that comb and spin	60	59	18.5	26.1
Combing machines	683	584	35.5	44.5
Spindles	517,619	375,643	25.9	30.9
Establishments that spin only	38	14	11.7	6.2
Spindles	163,096	61,928	8.2	5.1
Establishments that comb, spin, and weave	45	36	13.9	15.9
Combing machines	1,181	703	61.3	53.6
Spindles	1,138,361	710,717	57.0	58.4
Looms	27,769	20,963	61.4	67.8
Establishments that spin and weave	42	23	13.0	10.2
Spindles	176,546	68,642	8.9	5.6
Looms	5,490	2,578	12.1	8.4
Establishments that weave only	134	91	41.4	40.2
Looms	12,011	7,369	26.5	23.8
Miscellaneous establishments	1	1	0.3	0.4

¹ This table and the one on the following page were compiled under the supervision of the writer while connected with the Bureau of the Census. Permission to use them in this place has been granted by the Director of the Census.

² An "establishment," according to the Census Bureau, is a mill, or set of mills, in one locality under common ownership and operated as a single plant, with one set of books.

WOOLEN MILLS CLASSIFIED ACCORDING TO OPERATIONS PERFORMED

Classification	Number		Per cent of Total	
	1909	1904	1909	1904
Establishments, total ¹	587	792	100.0	100.0
Spindles, total.....	1,557,572	2,011,493	100.0	100.0
Looms, total	27,262	32,957	100.0	100.0
Establishments that spin only.....	85	104	14.5	13.1
Spindles	167,378	246,880	10.7	12.3
Establishments that spin and weave	450	612	76.6	77.3
Spindles	1,390,294	1,764,613	89.3	87.7
Looms.....	26,738	31,614	98.1	95.9
Establishments that weave only	10	23	1.7	2.9
Looms	524	1,343	1.9	4.1
Miscellaneous establishments	42	53	7.2	6.7

their own wool, and in this respect there is but little difference between woollen and worsted mills. Moreover, in both branches the finishing is also as a rule done in the mills that weave the cloth.

It is in the intermediate processes that specialization exists in the worsted branch. Thus, one set of mills is engaged in combing and spinning only, or spinning alone, while another set is engaged solely in weaving. However, a few worsted mills, — and these comparatively large ones, — perform all three of the cardinal processes of combing, spinning, and weaving. The Census Bureau has had compiled two tables which show the degree of specialization in the two main branches of the industry. They show the number of mills engaged in each of the principal processes of manufacture, together with their capacity as measured by the number of combs, spindles, and looms.

¹ An "establishment," according to the Census Bureau, is a mill, or set of mills, in one locality under common ownership and operated as a single plant, with one set of books.

Of the 324 worsted mills reported in 1909 only 45, or 13.9 per cent of the total, were engaged in performing every operation; four did combing alone, 60 combined combing and spinning; and 134, or 41.4 per cent of the total, did only weaving. A glance at the woolen mill table shows that of the total of 587 mills, 450, or 76.6 per cent performed both operations of spinning and weaving, leaving 85 that spun only and 10 that did only weaving. (It must be remembered that there is no combing in the woolen process.) These figures suffice to show the greater degree of specialization in worsted mills than in woolen mills. But explanation of some of the items will demonstrate that the differences between the two branches are even more marked than the figures seem to indicate.

In comparing the proportion that each class of worsted mills formed of the total for the years 1904 and 1909, it will be seen that in each case where only one operation is performed, the per cent of the total increased. This is especially noticeable in the case of spinning mills and weaving mills. In each class where two or more operations are combined, the proportion of the total diminished, with one exception, — that of mills which combine spinning and weaving, — where the number increased from 23 to 42 and the proportion from 10.2 per cent to 13.0 per cent. The explanation of this increase is that many mills originally equipped with woolen machinery have changed over to the weaving of worsted goods. Looms intended for the weaving of woolen fabrics may be used in weaving worsteds, as mentioned above, but woolen spindles cannot be utilized in spinning worsted yarn; hence these mills have gone into the market to buy worsted yarn but have continued at the same time to spin some woolen yarn. If these mills were eliminated, or

thrown with the mills that weave only, the number that both spin and weave would have been about the same in the two years, and the proportion would have fallen appreciably. Altho the interval of time between the two census years is short for drawing general conclusions, the tendency toward a greater degree of specialization in the worsted manufacture is unmistakable.

Attention is called to the fact that altho only 45 of the 324 worsted mills reported in 1909 performed all processes, they contained well over half of all the combs, spindles, and looms in the industry. It might be inferred from this that the figures relating to number of establishments are misleading as a measure of the extent of specialization. As a matter of fact, these 45 mills include some very large ones, in many of which combing, spinning, and weaving are carried on in separate buildings, located in close proximity to each other. The mere fact that they are under a common ownership, and are thus reported by the census as a single establishment, does not mean that they are any less specialized than if the various departments were situated in different localities, and owned by independent corporations.

The existence of only four combing mills in 1909 is of particular interest, in view of the specialization in this branch in foreign countries. Here again the figures of the table are somewhat misleading, because a few of the very large establishments reported in the table as performing every process make a business of manufacturing tops for the market as well as for their own requirements. This explains how there can be 38 mills which spin only, because obviously the four combing mills with only 61 combing machines could not supply this large number of mills with tops. There are also three or four mills in the United States which

make their principal business that of scouring wool, but which also do some combing on commission. On the whole it has always been the usual practice in this country to combine combing with spinning. That there is a distinct tendency, however, to specialize in wool combing is evident first, from the fact that the number of separate combing mills, altho still small, is increasing; second, because the number of spinning mills has been increasing very rapidly (from 14 to 38 in five years); and third, because the quantity of wool tops purchased by spinners increased from 5,261,000 pounds in 1899 to 20,269,000 pounds in 1909. The table clearly shows that the combing departments of the large combined establishments, alluded to above, are undertaking this specialized top making to a greater extent than separate and independent top mills, because the number of combing machines in the mills that combine all three processes increased from 703 in 1904 to 1,181 in 1909, or from 53.6 per cent to 61.3 per cent of the respective totals. The proportion of spindles and looms, on the other hand, decreased, indicating that these establishments must have been increasing their output of tops more and more in excess of their own requirements.

As for the woolen branch, it must be remembered that we are dealing with an industry that is declining in number of establishments and barely holding its own in value of products. It will be observed that the proportion of spinning mills has slightly increased. Of the 85 such mills reported in 1909, however, there were no less than 18 or 20 which spun only carpet yarns, and many others which spun only yarn for knitting mills. The fact that the number of weaving mills declined from 23 in 1904 to 10 in 1909 is sufficient evidence that in the manufacture of woolen cloths there has been no tendency to increasing specialization.

Another marked difference between worsted and woolen mills is the greater average size of the former. In 1909 there were 324 worsted mills, producing \$312,625,000 worth of goods, an average output of \$963,040; there were 587 woolen mills which produced goods to the value of \$107,119,000, an average output of \$182,486. Worsted mills employed an average of 343 wage earners per establishment; woolen only 89. The average number of worsted spindles working together was 10,787, while the average number of woolen spindles was only 2,911. There are comparatively few small worsted mills, while in Lawrence, Massachusetts, there are three mills which are among the largest in the world. On the other hand, there are many small woolen mills scattered throughout the country districts the inclusion of which reduces the average size; if these were eliminated the disparity in size would not be so extreme, tho it would still be marked. Large-scale production therefore exists to a much greater degree in worsted than in woolen mills, a condition which is to be expected in an industry which is highly specialized; in fact the reasons underlying specialization largely account for the varying size of producing units.

Another feature of the organization of the industry is the existence of what has been referred to above as horizontal specialization. In the worsted branch it is the rule for weaving mills to specialize on particular kinds of fabrics. One mill makes only serges for men's wear; another, fancy worsteds; a third, light-weight worsteds for women's wear. Even in the manufacture of a particular class of fabrics, mills may be further subdivided according to the quality of goods produced, or, what amounts to the same thing, the quality or fineness of yarns used. Still other mills devote their energy exclusively to the manufacture of cotton-warp

goods. It is, of course, common for a mill to turn out different kinds of fabrics and different qualities of the same fabric, but in general it may be said that there is in this respect a marked degree of specialization in the worsted manufacture. Conditions are different in the woolen branch; specialization in fabrics is not so common. Woolen goods are of such endless variety that there are few staple or standard fabrics in the trade. Each mill turns out various grades of goods and uses various combinations of different kinds of wool, and of mixtures of wool with shoddy and cotton. Only when woolen goods are manufactured on a very large scale, as in the case of the American Woolen Company, is it possible to allow a single mill to work exclusively on one class or on a narrow range of fabrics. The practice of carrying out this "plant specialization" to the uttermost extent is an important feature of the American Woolen Company's organization.

Before inquiring into the reasons for the different degrees of specialization in the two branches, let us compare the organization of the industry in the United States with that in Europe. In England, where the wool manufacture has reached the highest development, we find, as in this country, the two distinct branches, woolen and worsted. The worsted branch, instead of being of recent development as in the United States, is old, and it became subjected to the factory system before the woolen branch.¹ Until shortly before the industrial revolution, the worsted trade was concentrated in and about Norwich in the East of England, where it had been in existence for centuries. Since the advent of the factory system, however, the industry has all but disappeared from the

¹ Clapham; *Economic Journal*, vol. xvi, p. 517. I am indebted to Professor Clapham for much of my material on the organization of the industry abroad.

East of England and has become concentrated in the West Riding of Yorkshire. There Bradford, Leeds, Huddersfield and the neighboring cities constitute the leading wool manufacturing center in the world. So far as the worsted branch is concerned, this section has almost a monopoly in England; of the 2,823 combing machines in the United Kingdom in 1904, all but 280 were in the West Riding.¹ The woolen trade is also heavily concentrated in this district, altho there are many mills in Scotland, Ireland, the West of England, and other sections, — a condition corresponding to the relative distribution of the two industries in the United States.

As for specialization, the same in general is true in England as in the United States: the worsted manufacture is subdivided into its various processes, while the woolen manufacture is marked by combined businesses. But in both branches, especially the worsted, specialization is carried further than in the United States. In the worsted branch there are two types of independent mills which exist to a very limited extent in this country — combing mills, and dyeing and finishing establishments. We have seen that in the United States it is the custom for spinners either to comb their own wool, or to buy their tops from large mills which make them in excess of their own requirements. In England, altho some combing is done in combined establishments, the great bulk of it is performed in a separate set of factories called "top mills," which usually comb wool on commission for spinners or, more commonly, for merchants, — the so-called "top makers." Furthermore, it is unusual for a worsted spinning or weaving mill to dye or finish its own goods. Whether the wool be dyed "in the yarn,"

¹ Clapham, *Woolen and Worsted Industries*, p. 20.

or "in the piece," it is generally done on commission by a separate set of establishments. The principal dyeing and finishing plants are combined into the Bradford Dyers' Association, which Professor Clapham, in his *The Woolen and Worsted Industries* characterizes as "probably the most successful of British industrial combines."¹ In the United States it is the almost universal custom for wool manufacturers to dye and finish their own goods, altho there are a few yarn dyers who do business in a small way, especially in Philadelphia, where specialization has been carried further than anywhere else in the country.²

The most interesting and important difference, however, is the existence of the highly specialized wool-combing branch, which has always existed in the worsted trade in England. The combing of wool, altho at first blush apparently simple, is one of the most difficult and intricate of the processes of wool manufacture, and it was the last to be taken over by machinery. Mechanical combing was not perfected until between 1842 and 1853 as a result of the inventions of Lister, Heilmann, Donisthorpe, Holden, and Noble. Prior to that time practically all combing was done by hand, which undoubtedly accounts for the non-existence of the industry in the United States prior to 1860. This country has never paid much attention to the manufacture of combing machines except such as are suitable for the manufacture of carpet yarns, and even today about eighty per cent of those in use in the worsted industry are of foreign manufacture.

Inasmuch as combing was already a separate occupation in England, and had been for centuries, it was only

¹ P. 151.

² The industry reported as "dyeing and finishing" in the census reports is composed principally of mills which dye, bleach, print, and finish goods for the cotton trade.

natural that it should have continued so when it became subjected to mechanical manipulation. Furthermore, some of the inventors of combing machines, after successfully staving off, through litigation, infringement and usurpation of their patents, established top mills and worked their own combs on commission for spinners. The firm of Isaac Holden and Sons, which has large combing mills in Bradford, as well as on the Continent, is a case in point. To this day, Holden combs are confined almost exclusively to these mills. Professor Clapham assigns as further reasons for the existence of a specialized wool combing industry in England the greater economy due to the specialized knowledge of managers and foremen in this delicate and complicated series of processes; the possibility of running combing mills both day and night; and the growing practice among spinners of buying tops instead of wool. The tendency in England is toward greater specialization in this branch of the industry, and there have been a number of instances in Yorkshire of late years where combined combing and spinning plants have split apart.

In the woolen trade in England specialized spinning and weaving plants are comparatively scarce, and while it is the general rule for woolen mills to do their own dyeing and finishing, many have this work done on commission, as in the worsted trade. It is in this respect that the woolen trade may be said to be more highly specialized in England than in this country. There are a few specialized English woolen spinning plants, but they have been declining in number, and many of those that still exist make yarns for carpet and knitting mills, rather than for weavers of woolen cloths; a condition analogous to that in the United States.

On the Continent there is the same difference in organization between the two branches. In France

worsted predominate over woollens to a marked degree; in 1904 the proportion of worsted to woollen spindles was roughly as six to one. The industry is highly centralized, tho not to the same extent as in England. Its headquarters are at Roubaix-Tourcoing on the Belgian border near Lille, this district performing over 80 per cent of the combing and about half of the spinning and weaving for the whole country. The tendency is towards greater specialization and localization. In and about Reims, the second most important worsted section, there was but one mill in 1904 that combined spinning and weaving,¹ and this subdivision of processes is typical of the other worsted sections. The woollen trade is much more scattered, and is not marked by specialization.

An interesting feature of the industry in France is the existence of an active future market in tops at Roubaix where this commodity is bought and sold for speculative purposes. This is the only form from raw state to finished cloth in which wool may be sufficiently standardized to be dealt in speculatively; but even in the case of tops there is much opportunity for "mixing in" inferior wools which defy detection, and consequently abuses have crept in. There has been criticism of the operations of the Roubaix top market, but a movement to abolish it a few years ago resulted only in a tightening of the legal regulations. A similar market exists in Belgium at Antwerp, and there was formerly one at Leipsic which was abolished in 1899 by the German Government at the request of the trade.

In Germany the conditions, so far as specialization is concerned, are about the same as in France and England. The worsted branch shows the greater development

¹ Clapham, *Woolen and Worsted Industries*, p. 226.

during recent years, and this is made up of separate combing, spinning, and weaving mills. Combing and spinning are sometimes combined, but spinning and weaving very rarely. The industry is not yet full-grown, because it has never been able to spin enough yarn to supply the weaving mills; consequently large quantities of worsted yarn are imported from England, a fact which helps to make spinning a separate business in both countries. The industry is not concentrated in any one locality as in England and France but has four or five principal wool-combing "centers," about which the mills are segregated, much as in the United States. The woolen trade is not as specialized as the worsted, altho in 1897 only half the woolen yarn used was spun in combined spinning and weaving mills¹ thus showing a much higher degree of specialization than in the United States. The prevalence of an extensive hand-weaving trade is one reason for the existence of separate spinning mills.

Two questions arise from this review of the organization of the industry at home and abroad: first, why is the worsted branch more highly specialized than the woolen branch; and second, why it is that in the worsted manufacture combing has become more highly specialized in Europe than in the United States? Since the reasons underlying specialization largely account for the differences in relative size of plants and in the distribution of the two branches, these two features will not be considered separately.

It will be remembered that the main difference in organization between the two branches is that in the worsted manufacture spinning and weaving are done largely in separate plants, while in the woolen they are ordinarily combined in the same mill. In 1906

¹ Clapham, p. 248.

there appeared in the *Economic Journal*¹ an article by Professor Clapham in which he dealt with this very difference between the two branches, and sought reasons therefor. He gave as his first reason the historical fact that the factory system became established in the worsted branch a generation earlier than in the woolen; that specialization existed even before the advent of the factory system; and that mechanical worsted spinning and weaving were common while woolen spinning and weaving were still a combined household industry. It was only natural, therefore, that worsted should have continued as a specialized business, and that the woolen process should have been taken over *in toto* by factories when they were finally organized. If we attempt to apply this explanation to the difference as it exists in America, we find at once that it does not apply, because, as has been pointed out above, the worsted manufacture was practically non-existent before 1860, and did not become prominent until after the War, while the woolen industry had existed since early colonial times, and had been subjected to power spinning and weaving before the worsted branch appeared. Not only is this explanation inapplicable to the United States, but the experience in this country would seem to indicate that it does not deserve the importance attributed to it as an explanation of the difference in England. Professor Clapham himself has modified his views; for in his excellent book on *The Woolen and Worsted Industries* (1907) he treats the historical fact as subordinate, and says in speaking of the woolen branch:² "mere tradition would not have kept the combined businesses in existence, had technical and commercial considerations favored subdivision."

¹ Vol. xvi, p. 515.

² P. 149.

In this later work, Professor Clapham lays particular emphasis on the external demand for worsted yarn as causing specialized spinning in England. Power worsted spinning started in Yorkshire while hand weaving was still carried on in the East of England, causing a considerable demand for Yorkshire-spun yarn in that section. When this demand subsided with the disappearance of the weaving industry in the East, an immense export trade in worsted yarn gradually developed, and has continued in increasing quantity ever since; in 1905 the exports of worsted yarn from England were valued at over \$25,000,000. In addition, there is also a considerable demand for worsted yarns among knitting mills. The importance attached to this explanation by Professor Clapham is evident from his statement that "it is the continuance of this external demand in various forms which, more than anything else, has favored specialization."¹

Yet again, when we attempt to apply the explanation to American conditions, we find the external demand for worsted yarn to be meagre. There is practically no exportation, and a low tariff would undoubtedly lead to heavy importations. There is some demand on the part of hosiery and knitting mills, but in 1909 they bought only 10,370,000 pounds, while worsted mills purchased 53,327,000 pounds. Some of the worsted spinning mills also provide yarn to carpet manufacturers, but the principal demand is from worsted weavers themselves. The existence of an external demand for yarn does, of course, encourage separate spinning mills, and accounts for specialization to a certain extent both in England and the United States. But there are other considerations which are more fundamental, and which would undoubtedly cause a

¹ Clapham, *Woolen and Worsted Industries*, p. 141.

separation of the two processes if there were no external demand at all. The explanation must be sought within the industry itself.

It is an industrial commonplace that a high degree of specialization is possible only where there is a large output of and continuous demand for a uniform or standard product. When a mill makes a great variety of products, and especially when any degree of individuality is necessary to success, specialization is rendered difficult, or even impossible. This very difference exists between the worsted and woolen trades. A large proportion of worsted fabrics are "staples," the most important today being the highly popular "serge." Many large worsted mills operate on a single class of fabrics year in and year out, and use practically the same kind and quality of worsted yarn. There are therefore standard grades of worsted yarn constantly in demand. In the woolen trade there are almost no staple products. The mills produce "fancies," and the fabrics made by woolen mills have individual characteristics of their own. The success of the woolen manufacturer depends to a large extent on the quality and character of the yarn he uses, and there are hardly two woolen weavers who use yarns exactly alike. The blending of different kinds of wool is an important item; shoddy may be, and very commonly is, mixed with virgin wool in making woolen yarn; oftentimes cotton is carefully mixed with wool in the carding operation. All these things require the manufacturer's personal supervision, and render it necessary for him to spin his own yarn.

The difference in the character of the yarns goes far to explain the absence of specialization in the woolen trade, and the possibility of specialization in the worsted manufacture. It accounts also in part for

the greater average size of worsted mills, and their concentration within comparatively small areas. Homogeneous and uniform output, with a constant and ready market, is always conducive to large-scale production; while the fabrication of goods of varying qualities and innumerable patterns requires more individual attention and tends to curtail the scale of operations.

One reason that has been urged for the combination of all processes in woolen mills is that when they were first established in this country, they were necessarily so far apart, and transportation facilities were so poor, each mill was obliged to perform every step. But the absence of any tendency toward subdivision of processes today, when there are a hundred woolen mills in Massachusetts alone, indicates the weakness of this explanation. The fact is that woolen weaving mills are practically forced to do their own spinning because standardization of woolen yarns is impossible and hence there is no need of their being near to other mills. In the worsted manufacture, on the other hand, where the product of one set of mills becomes the raw material of another, there is ample reason why they should be concentrated within small areas.

Conclusive as this reasoning may be for the non-existence of specialized woolen spinning, it does not sufficiently account for the separation of spinning and weaving in the worsted branch. Even tho worsted yarns are capable of standardization, this fact would not prevent their being made in a combined mill. And this brings us to more technical considerations. It has already been pointed out that the preparatory processes are more complicated in worsted than in woolen spinning. In the latter, except for a few minor steps, the wool goes straight from the carding

engine to the spinning mule. In the former the wool, before it is ready for the spindle, has to go through a series of gill boxes, then through the combing machine proper, then through perhaps a couple more gill boxes, and finally through a number of machines for the drawing operation. There are thus a number of distinct steps in the preparation of wool for worsted spinning, while wool destined for the woolen spindle goes through but one. All these operations require careful supervision and concentration of energy, and it follows that much better results can be obtained — both as to quality and economy — if all are done in a separate establishment, rather than in a mill where the weaving and finishing operations are also carried on.

Furthermore, the complicated nature of worsted spinning makes necessary a much larger capital outlay, both because of the additional machinery required and the necessity of carrying larger stocks of wool and other materials. Only large corporations have sufficient capital at their command to equip a worsted mill thoroly for performing every operation from scouring the wool to finishing the cloth on a scale large enough to insure economical operation. It is interesting to note that during the stagnation in the wool trade in 1911 many of the failures among worsted mills were of comparatively small establishments which attempted to carry on all operations under one roof. To operate a small worsted mill which combines all operations would be somewhat analogous to attempting the production of structural steel from iron ore, in a small plant. The scale of operations possible in a plant equipped with one blast furnace, a single open-hearth furnace, a small rolling mill and a machine shop to match, would never justify the capital outlay. This

line of thought therefore furnishes another reason for the greater average capacity of worsted mills than of woolen mills.

In a worsted mill which combines all operations, the amount of capital tied up in the shape of raw wool and semi-manufactured products is an important item. Various grades of wool have to be kept on hand, and large quantities are constantly in process of manufacture, because sorting, scouring, combing, drawing, and spinning must be carried on simultaneously. Moreover, yarns of different counts and different colors must be kept in stock ready for the weavers. A concern which specializes in weaving alone buys only such yarns as it needs, and when it needs them. The spinner likewise buys his tops as the occasion demands. Neither is obliged to carry any quantity of semi-manufactured articles, and the consequent saving undoubtedly encourages the building of comparatively small specialized plants.

Still another reason for the existence of specialization in the worsted industry is the fact that many worsted weaving mills use not only different counts and grades of worsted yarn, but often considerable quantities of cotton, silk, and mohair yarns. Altho not a fundamental reason, this practice on the part of some mills undoubtedly encourages the purchase of worsted yarn from outsiders, rather than the manufacture of it within the mills themselves. As fabrics become more diversified, and as competition increases, weavers demand a greater and greater assortment of yarns, and they consequently suffer an increasing disadvantage if they try to do their own spinning. Even if a manufacturer does combine spinning and weaving, he is often obliged to seek in the open market certain grades of yarn which it does not pay to produce in his own mill.

One other contributing cause is undoubtedly to be found in the fact that many so-called worsted mills were formerly woolen mills, and that since they could use their woolen looms in weaving worsted fabrics, they naturally bought worsted yarn from those already in the business. It is fair to assume that when mills equipped with woolen cards, spindles, and looms have abandoned the manufacture of woolens and taken up the manufacture of worsteds, they have done so because the woolen manufacture had proved unprofitable; and it is not likely that they would have been in a position to raise the large amounts of capital necessary for the installation of worsted combing, drawing, and spinning machinery. The fact that woolen looms may be used in weaving worsteds has undoubtedly saved many mills from failure during the change in popular demand from woolens to worsteds.

There are therefore abundant reasons why woolen mills should combine spinning and weaving, and why worsted mills should devote themselves to one or the other of these processes. There remains to be explained the fact that the worsted manufacture has become even more highly specialized in Europe, where there exists a separate set of top mills.

The reasons assigned by Professor Clapham for the existence of a specialized top industry in England have already been noted,—the pre-factory organization of the worsted industry when hand combing was a separate and important occupation; the exploitation of patents by the inventors themselves; the greater economy resulting from specialized knowledge of managers and foremen; the possibility of running top mills both day and night; and the growing custom among spinners of purchasing wool in the form of tops rather than in the raw state. England also has an important

export trade in tops, as well as in yarns, and this is another factor which tends to specialization in combing. It will be observed that the first two reasons are historical, and that in so far as they account for the separation of combing from spinning in England, they also account for their combination in the United States. There was no hand-combing occupation in existence in this country when the worsted factories were started, and hence it was inevitable that the few pioneers who risked their capital in the early spinning mills should comb their own wool. When the future of the worsted industry was still problematical, it is unthinkable that either independent combing or spinning mills should have been established; since there was neither a sure market for tops nor a certainty on the part of spinners that they could procure tops from outside sources. The market for worsted yarn was also uncertain, because even during the seventies, when worsted suitings¹ were being manufactured for the first time on a large scale, it was the opinion of many in the trade that the business was precarious, and that a change of fashion might cause the industry to wane. The fact that combing and spinning machinery, as well as artisans to operate them, had to be imported from England also possibly encouraged the combination of the two processes in one mill. Furthermore, there were no American inventors of combing machines to exploit their own patents, and no foreign capital ventured into the worsted industry in this country, as it has done in recent years.

These reasons explain the combination of combing and spinning in the early days of the industry, and the custom became so firmly fixed that it has retarded

¹ The common worsted suitings which have become the great staple of the trade were not manufactured in this country until about 1860. Prior to that time worsted fabrics consisted mainly of dress goods for women's wear.

a development which, for technical reasons, might have begun earlier. The manufacture of tops for the open market did not begin in this country until about 1894 when the Arlington Mills of Lawrence, Massachusetts, ran their combs day and night in order to make a surplus of tops with which to test the market. Encouraged by the success of the experiment, by the demand for tops shown by the importation of foreign-made tops under the low twenty per cent duty of the Wilson Bill, and very likely by the thought that the next tariff revision would render the duty on tops prohibitive (as it had been previous to 1894), the Arlington Mills built a separate top mill to provide combed wool for worsted spinners. In 1898 this company published a little volume entitled *Tops: a New American Industry*, which gave a description of the new mill and the principal reasons for embarking on the enterprise. Since that time, as has already been pointed out, the trade in tops has increased rapidly, and altho there were only four independent mills in 1909 which combed exclusively, there were a number of large factories like the Arlington Mills which operated separate combing departments and made tops in excess of their own requirements.

There must, therefore, be commercial and technical reasons, more important than tradition, which account for the continued separation of combing from spinning in foreign countries, and for the tendency towards greater separation in this country; and these are exactly analogous to the reasons already advanced for the separation of worsted spinning from weaving. In the first place, tops, even more than worsted yarn, are a homogeneous and staple product and can be traded in with a fair degree of security, as is shown by the existence of future markets in Europe. Worsteds

mills are concentrated in small areas in the United States; good transportation facilities exist; and there has already grown up a body of merchants to act as middlemen between factories. Commercial conditions are therefore ripe for greater specialization. Again, the preparatory processes are so complicated and involve so many separate steps that greater economy may be attained by splitting them in two — combing in one plant, and drawing and spinning in another — just as technical reasons have led to a separation of spinning and weaving.

In European countries keen competition has undoubtedly hastened the tendency toward separation of combing and spinning. The margin of profit has unquestionably been higher in the worsted industry in this country than it has been abroad, and there has not been the same necessity for effecting the additional savings which would accrue from specialized combing. With a growing diversification of fabrics in recent years there have come into use a greater variety of blends of different wools, and as the spinner has to vary the quality of his yarns in accordance with the varying demand of the weaver, he must necessarily use different qualities and grades of tops. To attempt to carry in stock the different wools, and to make a small quantity of this grade of top and that grade, as the occasion demands, would necessarily be expensive. In other words, the spinner finds it cheaper to buy his combed wool from top specialists than to attempt to manufacture it himself. This increasing diversification of the industry is extremely important in its effect on specialization, especially in Europe. The English mills are not only adaptable to new conditions but they are continually devising new fabrics for their foreign trade. American mills have not been troubled by

foreign competition nor by a need of holding foreign markets; consequently there has been less diversity of fabrics and less demand for a variety of tops and yarns. Competition at home, however, has been bringing about gradually a state of affairs similar to that abroad, and as the industry develops, and as a greater variety of fabrics is produced, we may look not only for a greater degree of specialization in regard to spinning and weaving, but also for a separate and well established wool-combing branch.

L. D. H. WELD.

UNIVERSITY OF MINNESOTA.

FISHER'S THEORY OF CRISES: A CRITICISM

SUMMARY

The sequence of events leading up to a crisis, 95. — Interest as a factor in cost of production, 96. — A comparison of interest rates and commodity prices, 97. — Two-fold demand for loans causes rapid rise of interest, 98. — Increase in profits due to lagging behind of cost of production, 101. — Disappearance of profits due to increased cost of production, 102. — No automatic check to prosperity in rise of virtual interest rates, 104.

THE greater part of the literature on the subject of crises is disheartening reading because of the vagueness of the terms employed and the care with which the crucial question is evaded, — what brings prosperity to an end? Professor Fisher, however, in his excellent book, *The Purchasing Power of Money*, has met the issue squarely and has presented his views in his usual interesting style. Hence his theories as to the relation between interest and crises are worthy of careful consideration and frank discussion. The sequence of events leading up to the crisis he states as follows: —

- (1) Prices rise (whatever the first cause may be; but we have chosen for illustration an increase in the amount of gold).
- (2) The rate of interest rises, but not sufficiently.
- (3) Enterprisers (to use Professor Fetter's term), encouraged by large profits, expand their loans.
- (4) Deposit currency (M') expands relatively to money (M).
- (5) Prices continue to rise, that is, phenomenon No. 1 is repeated. Then No. 2 is repeated, and so on.

In other words, a slight initial rise of prices sets in motion a train of events which tends to repeat itself. Rise of prices generates rise of prices, and continues to do so as long as *the interest rate lags behind its normal figure*.¹

In the above scheme, the rate of interest figures in two ways: because the rate of interest lags behind

¹ Fisher, *The Purchasing Power of Money*, p. 60.

prices, profits increase and loans are encouraged; and because the rate of interest ceases to lag behind its normal figure, the enlarged profits disappear, loans are discouraged, and the rise of prices is checked.

Taking up the first statement, that interest lags behind prices in the upward movement, I hold that it may, on the contrary, take the lead. It may be well to state that no exception is taken to the theory that during a period of prosperity the interest rate may lag behind prices in the sense that the relations between debtor and creditor are changed; that the rate of interest may not rise sufficiently to compensate the creditor for the lessened purchasing power of money.¹ But that is another matter. Professor Fisher in the sequence of events just quoted is using interest as a factor in the cost of production. He says:—

Among his [the business man's] costs is interest, and this cost will not, at first, rise. Thus the profits *will* rise faster than prices. Consequently, he will find himself making greater profits than usual, and be encouraged to expand his business by increasing his borrowings.²

The business man concerns himself practically not at all with virtual interest rates (that is, interest expressed in commodities). But he is vitally interested in the changes in nominal rates of interest. If interest charges form only a small proportion of his cost of

¹ "To all intents and purposes, therefore, when A borrows one hundred dollars from B in order to purchase, say, one hundred units of a given commodity at one dollar per unit, it may be said that B is virtually lending A one hundred units of that commodity. And if at the end of a year A returns one hundred dollars to B, but the price of the commodity has meanwhile advanced, then B has lost a fraction of the purchasing power originally loaned to A. For even tho A should happen to return to B the identical coins in which the loan was made, these coins represent somewhat less than the original quantity of purchasable commodities. Bearing this in mind in our investigation of interest rates, let us suppose that prices are rising at the rate of 3 per cent each year. It is plain that the man who lends \$100 at the beginning of the year must, in order to get 5 per cent interest in purchasing power, receive back both \$103 (then the equivalent of the \$100 lent) plus 5 per cent of this or a total of \$108.15. That is, in order to get 5 per cent interest in *actual purchasing power*, he must receive a little more than 8 per cent interest in money. The 3 per cent rise of prices thus ought to add approximately 3 per cent to the rate of interest." Pp. 56-57.

² P. 59.

production, a marked rise in the rate would not greatly affect his profits; but if interest formed a large proportion of his cost of production, even a small increase in the nominal rate would cut heavily into profits or cause them to disappear altogether.

At any rate, putting interest rates and commodity prices on a comparative basis, their index numbers show that interest as a cost of production in many instances rises more rapidly than do commodity prices. For example, it is shown in Table I (below), before the crisis of 1883 in Germany, credit accommodations which in 1879 cost the business man \$100.00 would in 1880 cost \$114.60; in 1881, \$119.80; in 1882, \$122.60; and in 1883, \$109.20. This represents an increase in interest charges of from 9 to 22 per cent, whereas the rise in commodity prices during this period did not exceed $4\frac{1}{2}$ per cent.

An examination of five crises in Germany and six in England does not bring to light any uniform tendency for interest as a cost of production to lag behind prices. Summarizing the results of Tables I and II, it is found that in the eleven crisis periods cited, in which prices were rising, the more frequent case was that nominal interest rates rose more rapidly than prices, as follows:—

Interest rose more rapidly than prices in:—

The year of the crisis	11	times	out	of	11
The year before	"	10	"	"	" 11
2nd "	"	"	7	"	" " 11
3rd "	"	"	6	"	" " 9
4th "	"	"	2	"	" " 5
5th "	"	"	1	"	" " 3
6th "	"	"	2	"	" " 2
7th "	"	"	0	"	" " 2

39 times out of 54

The explanation for the rapid rise in interest rates is to be found in part in the two-fold demand for loans. A rise in interest rates, ordinarily speaking, is due to an increased demand for loans. If the increased purchasing power obtained through these loans were wholly employed to increase the demand for commodities, as Professor Fisher implies, prices might always advance more rapidly than interest charges. But there is, during periods of prosperity, a very large and growing demand for loans, which from their use can contribute only remotely if at all to the rise of commodity prices. In so far as the stock exchange brings the promoter and investor together, it does tend to foster promotion, hence to increase the demand for goods and thus contribute to the rise of commodity prices. But there is a great mass of gambling, of speculative buying and selling for local and arbitrage business, manipulation for purposes of control, and the like, all of which require heavy loans, and yet in no way does the credit so employed contribute to the movement of commodity prices. The demand for loans for such purposes, however, affects the rate of interest as truly as does demand for loans for strict commercial enterprises. I hold that the relative movements of interest and commodity prices during these transition periods cannot rightly be interpreted without taking into account this other demand for credit, a demand which often reaches enormous proportions.¹

If the increase in profits in many lines of business which follows a rise of prices is not due to the lagging behind of interest rates, its origin must be sought elsewhere. Is it not the lagging of the cost of pro-

¹ Cf. Minnie Throop England, "Statistical inquiry into the influence of credit upon the level of prices," *University Studies* (University of Nebraska), January, 1907.

TABLE I¹

A COMPARISON OF INTEREST RATES AND COMMODITY PRICES
IN GERMANY PRECEDING FIVE CRISES

Year	Rate of Discount		Prices	
	Per cent	Index number	Soetbeer's	Index Number
1851	4.000	100.0	82.8	100.0
1852	4.000	100.0	84.1	101.6
1853	4.197	104.9	94.0	113.5
1854	4.359	109.0	100.2	121.0
1855	4.075	101.9	102.7	124.0
1856	4.933	123.3	101.9	123.1
1857 crisis	5.754	143.8	107.5	129.8
1861	4.000	100.0	97.6	100.0
1862	4.000	100.0	101.4	103.9
1863	4.081	102.0	103.7	106.1
1864	5.306	132.6	106.9	109.5
1865	4.981	124.5	101.4	103.9
1866 crisis	6.168	154.2	104.0	106.4
1868	4.000	100.0	100.8	100.0
1869	4.241	106.0	102.0	101.2
1870	4.907	122.7	101.6	100.8
1871	4.160	104.0	105.0	104.1
1872	4.290	107.2	112.0	111.1
1873 crisis	4.956	123.9	114.3	113.4
1879	3.700	100.0	96.8	100.0
1880	4.240	114.6	100.8	104.1
1881	4.433	119.8	100.1	103.4
1882	4.538	122.6	101.0	104.3
1883 crisis	4.041	109.2	101.0	104.3
1887	3.408	100.0	84.3	100.0
1888	3.321	97.4	84.3	100.0
1889	3.671	107.7	87.7	104.0
1890	4.519	132.6	89.4	106.0
1891 crisis	3.786	111.1	90.3	107.1

¹ Table I is prepared from Soetbeer's Relative Prices in Hamburg, and from Palgrave's Bank Rate (p. 157), from which the average daily rate of discount of the Imperial Bank of Germany is computed.

TABLE II¹A COMPARISON OF INTEREST RATES AND COMMODITY PRICES
IN ENGLAND PRECEDING SIX CRISES

Year	Rate of Discount			Prices		
	l.	s.	d.	Index number	Sauerbeck's	Index number
1849	2	18	7	100.0	74	100.0
1850	2	10	1	83.1	77	104.1
1851	3	0	0	119.4	75	101.3
1852	2	3	0	85.6	78	105.4
1853	3	13	10	150.3	95	128.4
1854	5	2	3	203.1	102	137.3
1855	4	17	10	194.7	101	136.5
1856	6	1	2	241.1	101	136.5
1857 crisis	6	13	3	265.2	105	141.9
1858	3	4	7	100.0	91	100.0
1859	2	14	7	74.9	94	103.3
1860	4	3	7	114.6	99	108.8
1861	5	5	4	167.3	98	107.7
1862	2	10	7	60.9	101	110.9
1863	4	8	2	120.9	103	113.2
1864	7	8	0	200.7	105	115.3
1865	4	15	4	130.7	101	110.9
1866 crisis	6	19	0	190.6	102	111.9
1870	3	2	0	100.0	96	100.0
1871	2	17	8	93.0	100	104.2
1872	4	2	0	132.2	109	113.7
1873 crisis	4	15	10	154.5	111	114.8
1879	2	10	4	100.0	83	100.0
1880	2	15	4	109.9	88	106.0
1881	3	10	0	139.1	85	102.4
1882	4	2	8	164.2	84	101.2
1883 crisis	3	11	4	141.7	82	98.8
1887	3	7	0	100.0	68	100.0
1888	3	5	11	98.4	70	102.9
1889	3	10	11	115.8	72	105.8
1890 crisis	4	10	5	134.6	72	105.8
1896	2	9	8	100.0	61	100.0
1897	2	12	8	106.0	62	101.6
1898	3	4	10	130.5	64	104.9
1899	3	15	0	151.0	68	111.5
1900 crisis	3	19	6	160.1	75	122.9

¹ Table II is prepared from Sauerbeck's Relative Prices in England, and from Palgrave (p. 15) which gives the annual average minimum rate of discount of the Bank of England. The year of lowest prices preceding a crisis is taken as the basic number 100 (this is true of Table I, also), and varies from three to nine years before the crisis.

duction behind the price of the finished product that gives rise to enlarged profits? Any increased demand for goods causes a rise of prices, but not a uniform rise throughout the entire field (not even when the larger demand is due to increased gold supplies), hence the prices of finished products and raw materials, for example, are not uniformly increased. Demand always picks out specific commodities, causes the price of these commodities to rise relatively to other commodities. The price of raw materials in some lines may rise more rapidly than the price of the finished product and thus tend to decrease profits; the price of the finished product in another line may rise faster than the price of raw materials and a margin for enlarged profits appear. The same is also true of such costs of production as rents and wages.

Therefore it would be as fitting to substitute for interest in sequence 2 of Professor Fisher's theory, any other one of the elements that go to make up the cost of production as to leave interest to fill that place alone. We could as well say (1) prices rise, (2) the cost of raw materials rises but not as much as the prices of finished products, hence profits are large, and (3) enterprisers are encouraged by large profits to expand their loans, and so on; or we could say (1) prices rise, (2) wages rise, but not as much as prices, hence profits are large, — and so on. It is surely misleading to ascribe the increase in profits resulting from an enlarged demand for goods solely to the lagging behind of interest charges, since any one or all of the factors of cost of production may be the laggard or laggards.

If it is true that the increase in profits during a period of rising prices is due to the fact that the cost of production does not increase as rapidly as the price of the finished product, then Professor Fisher's second prop-

osition, that the enlarged profits disappear when interest rates have overtaken prices, becomes illogical. It must be amended by saying that the enlarged profits disappear when the rise in the cost of production has overtaken the rise in the price of the finished product. I believe that more light can be thrown upon profits by studying the relative movement of the prices of raw materials and finished products than can be obtained by comparing interest rates and prices. An examination of trade reports from fifty-three different industries in Germany for 1906,¹ the year before the crisis, gives results as follows: 26 complain of small or reduced profits; 7 speak of a lessened demand for products; 11 mention keen or excessive competition; 28 refer to unsatisfactory prices, implying that the price of the finished product cannot be pushed up to compensate for the higher cost of production; 1 cites the high cost of production; 5 complain of strikes or labor troubles, 8 mention reduction in hours of labor, 9 refer to a scarcity of labor, and 25 speak of a rise in wages. Only 4 mention the rise in interest rates, while 43 speak of the rise in the prices of raw materials.

Professor Fisher fixes the point at which interest rates become prohibitive, thus bringing prosperity to an end, as the point when the interest rate reaches its normal figure, — that is, the rate which would exist were prices stationary.² But during a period of prosperity comparatively little attention is paid to the relation between the rate of interest and present or past earnings of capital; but borrowings for new and speculative undertakings will continue until the rate of interest is equal to or greater than the expected rate of future returns. This point may be higher or lower than that set by the normal rate of interest.

¹ From U. S. Monthly Consular and Trade Reports, July–October, 1907.

² P. 58.

What of investors who believe prospectuses that promise a return of 50 per cent or even 75 per cent! Professor Fisher overlooks the fact that promotion often becomes a mania when he says: "As soon as the interest rate becomes adjusted, borrowers can no longer hope to make great profits, and the demand for loans ceases to expand."¹ Investors often keep on hoping for large returns even tho everything points to low.

In addition, interest rates in many cases do not reach their normal figure, altho they may rise very rapidly as a cost of production, until after the crisis is on, and hence they cannot be the check to prosperity that Professor Fisher has described when he says that "rise of prices generates rise of prices and continues to do so as long as the interest rate lags behind its normal figure." In other words, he says that as long as virtual interest rates (rates measured in commodities) are abnormally low, prosperity will continue.

An examination of Tables III and IV, which compare nominal and virtual interest rates for various crisis cycles, reveals the fact that sometimes a crisis occurs even tho virtual interest rates are abnormally low, as in 1873 in Germany and England, or in 1900 in the latter country. It is found also that prosperity may continue for several years after virtual interest rates are high, as in the crisis of 1883 in England. The rise of virtual interest rates might be the check to prosperity in some cases, but in many it clearly is not. It is not until after the crisis begins that there is a uniform tendency for virtual interest to overtake the nominal. In 8 out of 11 crises, virtual interest, during the crisis year, is lower than the nominal rate; during the year after the crisis, virtual interest is higher than

¹ P. 64.

the nominal in 8 cases out of 9. It looks as if it could more properly be said that the rapid rise of virtual interest rates was due to the stoppage of prosperity, than that the check to prosperity comes from the rise of virtual interest rates.

TABLE III

A COMPARISON OF NOMINAL AND VIRTUAL INTEREST RATES IN GERMANY¹

Year	Per cent rise of prices	Nominal interest	Virtual interest
1854	6.6	4.3	-2.3
1855	2.4	4.0	1.6
1856	— .8	4.9	5.7
1857 crisis	5.5	5.7	.2
1858	-12.8	4.1	16.9
1863	2.1	4.1	2.0
1864	3.2	5.3	2.1
1865	-5.1	5.0	10.1
1866 crisis	2.4	6.1	3.7
1867	-1.1	4.0	5.1
1870	— .4	4.9	5.3
1871	3.3	4.1	.8
1872	6.6	4.3	-2.3
1873 crisis	2.5	5.0	2.5
1874	-2.0	4.4	6.4
1880	4.1	4.2	.1
1881	— .7	4.4	5.1
1882	.9	4.5	3.6
1883 crisis	.0	4.0	4.0
1884	-6.6	4.0	10.6
1888	.0	3.3	3.3
1889	4.0	3.6	— .4
1890	1.9	4.5	2.6
1891 crisis	1.1	3.7	2.7

¹ The minus sign in the second column indicates a fall of prices. The same method of computing virtual interest is employed in Tables III and IV that Professor Fisher has used for the crisis of 1907 (page 271), that is, the per cent of rise of prices is subtracted from the nominal interest rate to obtain virtual interest. The prices and rates of these tables are obtained from the same sources as Tables I and II above.

TABLE IV
A COMPARISON OF NOMINAL AND VIRTUAL INTEREST RATES
IN ENGLAND

Year	Per cent rise of prices	Nominal interest	Virtual interest
1854	7.3	5.1	-2.2
1855	-1.0	4.9	5.9
1856	.0	6.0	6.0
1857 crisis	4.0	6.6	2.6
1858	-13.3	3.2	16.5
1863	2.0	4.4	2.4
1864	2.0	7.4	5.4
1865	-3.8	4.8	8.6
1866 crisis	1.0	6.9	5.9
1867	-1.8	2.5	4.3
1870	-2.0	3.1	5.1
1871	4.1	2.9	-1.2
1872	9.0	4.1	-4.9
1873 crisis	1.8	4.8	3.0
1874	.8	3.7	4.5
1880	6.0	2.8	-3.2
1881	-3.4	3.5	6.9
1882	-1.2	4.1	5.3
1883 crisis	-2.4	3.6	6.0
1884	-7.3	2.9	10.2
1887	-1.4	3.3	4.7
1888	2.9	3.3	.4
1889	2.8	3.5	.7
1890 crisis	.0	4.5	4.5
1891	.0	3.2	3.2
1897	1.6	2.6	1.0
1898	3.2	3.2	.0
1899	6.2	3.7	-2.5
1900 crisis	10.3	4.0	-6.3

It is not intended to minimize the value of a study of the relation between interest and crises. But surely Professor Fisher has both exaggerated the importance and mistaken the nature of the relation between the

two when he endeavors "to show that the peculiar behavior of the rate of interest during transition periods is largely responsible for the crises and depressions in which price movements end." The value of his book cannot be questioned, but its strongest features, I believe, lie outside the field of crises.

MINNIE THROOP ENGLAND.

UNIVERSITY OF NEBRASKA.

THE ORIGIN OF THE NATIONAL CUSTOMS-REVENUE OF ENGLAND¹

SUMMARY

Importance and difficulty of the subject, 107. — I. Review of customs theories, 108. — *A priori* theories of customs origins, 108. — Prise theory of Mr. Hall, 110. — Purveyance, 113. — Prise of merchants' goods, 113. — Prise commutations, 117. — The customs of 1275, 118. — Later history of the prise, 121. — The chain of errors in the prise theory, 123. — II. Local customs, 123. — *Custuma ville*, 124. — Periods in the development of local customs, 125. — Medieval and modern local customs compared, 127. — Local customs not to be expanded into national customs, 128. — III. Semi-national customs, 1050-1275, 130. — Lastage, 130. — Scavage, 133. — Ancient wine custom, 134. — The prise of wines, 136. — *Recta prisae*, 137. — Decay of these dues, 142. — IV. The customs experiment of King John, 143. — The fifteenth, 143. — The Great Winchester Assize of Customs, 144. — Failure of King John's customs system, 146. — V. Conclusion, 147. — Classification of customs, local, semi-national, and national, 147. — Efforts to create a national system, 1275-1347, 147. — Great influence of the local upon the national system, 148.

THE problem of the origin of the English customs-revenue is one of more than antiquarian interest. The subject forms an indispensable chapter in the history of taxation; it has a bearing on constitutional history;

¹ It will be convenient to group at the outset the titles of the chief books most frequently cited hereafter, together with the abbreviations used:

— Hall, *History of the Custom-Revenue in England* (1885), — Hall, *Custom-Revenue*.
— Dowell, *History of Taxation and Taxes in England* (1888), — Dowell.
— Madox, *History and Antiquities of the Exchequer* (1711), — Madox.

— Bateson, *A London Municipal Collection of the Reign of John*, — Bateson, *English Hist. Rev.*

Calendar of Charter Rolls, — Cal. Ch. R.

Calendar of Close Rolls, — Cal. Cl. R.

Calendar of Patent Rolls, — Cal. Pat. R.

Rotuli Litterarum Patentium, — Rot. Lit. Pat.

Rotuli Litterarum Clausarum, — Rot. Lit. Cl.

Rotuli Chartarum, — Rot. Ch.

The manuscript sources which I have consulted are as follows. At the Record Office in London: the Customs Accounts of the Exchequer, King's Remembrancer

and it is of especial importance in a study of the development from the local to the national economy of England.

The student of the early history of the customs is beset by difficulties at every hand. There are comparatively few documents giving specific information for the period before 1275. After that year the detailed customs accounts, many of which still remain, were returned to the Exchequer. Undated or incorrectly dated documents add to the confusion.¹ The lack of a discriminating nomenclature at the formative period, which is of course to be expected, is a great drawback since it forces the investigator to exclude scores of documents too vague to be of service.

I

REVIEW OF CUSTOMS THEORIES

Difficult and obscure as is the problem of customs origins, there is no lack of explanatory theories. The first group of explanations may be designated *a priori*: the need that traders felt for protection, giving the crown an opportunity to offer its aid and to collect

branch, cited as K. R. Customs; the Wardrobe Accounts, cited as K. R. Accounts; the Pipe Rolls; the Memoranda Rolls; and the Pipe Rolls of the Bishop of Winchester, cited as Ecclesiastical Commission, Various.

At the British Museum: various manuscript collections, especially the Harleian.

About 20-25,000 Port Books (K. R. Port Books) were opened to the public early in the winter of 1911-12. By the courtesy of the Record Office officials, I was permitted to examine these documents even before they were made generally accessible. See my letter to the *Athenaeum*, November 18, 1911, p. 625; and also my Memorandum on the Port Books and Coast Bonds in the Public Record Office, of December 12, 1911, privately circulated by the Royal Commission on Public Records.

¹ Dowell, for instance, dates the *Statutum de Scaccario* at 1266 (i. p. 77), following the statutes at large, when it should be put in the early part of the 14th century. Likewise the documents printed in *Liber Albus* are not carefully dated. To Professor Liebermann (*Zeitschr. der Savigny-Stiftung*, V, 1885; *Leges Anglorum*, 1894) and to Miss Bateson (*English Hist. Rev.*, xvii, pp. 480-511, 707-730) not a little is due for text criticism and text editing.

a toll therefor;¹ the necessity of a royal licence to trade, particularly to import;² and finally, the assertion that the export tax was but a part of the general system of taxing personal property.³ It is small wonder that a critical scholar has scoffed at such theorizing.⁴

However well such views may fit in with the results of comparative studies of primitive conditions, they are obviously not so worthy of consideration as conclusions which are based upon direct historical evidence. From his study of the documentary sources, particularly constitutional, Stubbs was well aware that there was something like customs duties before 1275, tho he seems to have regarded the grant of that year as the legal foundation of the English customs,⁵ limiting elsewhere, nevertheless, the application of the grant.⁶ The counterpart of this theory of political origin by parliamentary sanction is that which emphasises the rôle played by the royal prerogative, especially the prerogative prise.⁷ This is the chief contribution of Mr. Hubert Hall, who apparently followed up and elaborated a general statement made by Dowell.⁸ This view has gained most general acceptance,⁹ since it is the only one resting upon an apparently adequate

¹ Dowell, vol. i, p. 75.

² Hall, *Custom-Revenue*, vol. ii, pp. 76, 91-92. Bodin (*Six Livres de la République*, p. 875) combined these two elements of permission and protection.

³ Green, *History of the English People*, vol. i, p. 323; Stubbs, *The Early Plantagenets*, p. 230.

⁴ McKelvie, *Magna Carta*, p. 465 n.

⁵ *The Early Plantagenets*, p. 231.

⁶ *Constitutional History of England* (ed. 1875), vol. ii, p. 523.

⁷ Hall, *Custom-Revenue*, vol. ii, chaps. iii-v.

⁸ *Sketch of the History of Taxes in England* (1876), vol. i, p. 152. "Toll . . . appears to have originated in arbitrary exactions from the merchants."

⁹ Tout, *Edward I*, p. 141; Gardiner, *Students' History of England*, vol. i, p. 211; Stubbs, *Const. History of England* (4th ed.), vol. ii, pp. 549-550 n.; Medley, *Const. History of England*, p. 470; Alton and Holland, *The King's Custom*, p. 4.

examination of the sources, and sufficiently elaborate to seem to take into account all of the facts.¹ Sir James Ramsay, however, has expressed a dissatisfaction with our present knowledge of early customs history² which must, indeed, have been felt by others. My own researches into the records, both those long open to the public, and those newly accessible,³ have made it clear that the evidence needs to be re-examined and supplemented.

Two modern writers content themselves with describing the early history of the customs as "intricate," "obscure,"⁴ and "complicated,"⁵ and an earlier author goes so far as to declare that it is fruitless to try to discover the origin of the customs.⁶ But it is clearly recognized that there were at the time of the *Magna Carta* "ancient and right customs which are referred to as well-known things."⁷ It will be the task of this paper, therefore, to consider the nature of the ancient and due customs of the twelfth and thirteenth centuries, customs not only "well-known," but, when the crown was attempting new levies, very much cherished. Before any attempt is made, however, to offer a new explanation, it will be necessary to examine Mr. Hall's accepted prise theory.

By the year 1347, there existed for the first time all those dues afterwards forming integral parts of

¹ Mr. Hubert Hall, the chief advocate of the prise theory, has given me valuable assistance during the period of my researches in the British Record Office, and altho I cannot accept the views expressed in his Custom-Revenue, I wish to acknowledge the great debt I owe him.

² Dawn of the Constitution, p. 314.

³ See above, p. 107, n. 1.

⁴ Medley, Const. History of England, p. 470.

⁵ Maitland, Const. History of England, p. 180.

⁶ Gilbert, The Court of Exchequer (1738), pp. 214-215.

⁷ Maitland, Const. History of England, p. 180.

Is by
Shane.

the "customs and subsidies,"¹ but for the beginning of the customs system, with which we are specially concerned, it is essential to go back of this well-known set of customs. This may be conveniently done by a consideration of four main topics: (a) the prise itself, (b) the prise commutations, (c) the customs of 1275, and (d) the later history of the prise.

(a) *The prise.* The evidence brought forward by the chief exponent of the prise theory is very scanty. For the Anglo-Saxon period there is confessedly "no evidence," "But there is a strong presumption from the analogy of later Customs."² The examples for the later period cover the reigns from Henry II to Edward II and are either orders to provide various goods without further specification, or where information is definite, "examples of purveyance pure and simple."³ In the chapter following that containing the above references is a Chamberlain's account of 10 Richard I, in which are cited "prises proper, or goods purveyed and resold at a profit."⁴ These are three in number: wine, wool, and corn prises. The wine prise is dealt with below.⁵ The other two examples are important here. In the original document nothing is said about the wool in question being prise-wool.⁶ In case of the

¹ Under one or the other of the following categories every article exported or imported by alien or denizen was included and taxed:

Aliens	Denizens
Customs of 1275.	Customs of 1275.
New customs of 1302-03.	Cloth customs.
Subsidy on wool.	Subsidy on wool.
Tonnage and poundage.	Tonnage and poundage.

In addition to these was *prisage*, due on aliens' wines imported till 1302-03, and on denizens' wines imported till the 18th century.

² Hall, *Custom-Revenue*, vol. ii, p. 61.

³ *Ibid.*, vol. ii, pp. 64-69. In 1174-75 account was made "de Pris et redemptione prisonum et aliis perquisitionibus tempore werre." Pipe Roll, 21 H. II, p. 5.

⁴ Hall, *Custom-Revenue*, vol. ii, p. 83.

⁵ See p. 136.

⁶ "Et de XX^{li} de lana Willelmi de Bolonia vendita per visum Stephani Crami et Yvenis Clerici constabularii et Petri Bat." MS. Pipe Roll, No. 44, memb. 12 b.

prise-corn, the word "captus" is used, which clearly indicates a seizure of the goods themselves,¹ but elsewhere in the same document, "capture" is made from "the King's enemies" or because of contravention of the king's orders against exportation to Flanders. It is probable that the men of Rye who had their corn seized by the king were guilty of this offence, in common with the other men of the Cinque Ports.²

Up to the time of Richard I, then, not a single clear example of the general prise has been brought forward. None the less it behooves us to inquire if there can be found any further valid evidence for regarding the prise as a precursor of the customs. Is it true that the king sought so rough and ready a way of providing for his needs, which he later changed into a great financial system?

In the interpretation of the documents bearing upon the subject, one must clearly distinguish between two well-marked meanings of the word "prise." Failure to do so has marred much that has been written on the subject. The two meanings are, on the one hand, purveyance and, on the other, seizure of merchants' goods. Under these two heads, I list the chief prises found in the thirteenth century or earlier. The following scheme indicates the distinction which should be borne in mind:—

A. Purveyance from producers:³

I. Irregular:—

- (a) Use, provisions for king's household.
- (b) Abuse, (1) by king's servants, resale for profit.
(2) by king's order, wool, etc., for resale.

II. Regular: locally for provisioning castles.

¹ Et de XIII^{ti} et XIII^{ti} et XI^d de Blado capto ab hominibus de Ris.

² Madox, vol. i, p. 565 n. (1 John).

³ The antithesis of producers and merchants is obviously more convenient than logical.

B. *Prise of merchants' goods*: —

I. Irregular: local and foreign trade not differentiated.

(a) Use, (1) for wardrobe, wax, cloth, etc.

(2) for butlery, wine.

(b) Abuse, (1) excessive amounts, non-payment, delay of payment, undervaluation, etc.

(2) drawing the prise into a custom: —

(a') for resale, (b') for money fine.

II. Regular: the ancient prises due and accustomed.

(a) Foreign trade, for butlery, *prisa vinorum*:¹ —(1) *Pre-recta*, (2) *Recta*.

(b) Local trade.

Purveyance. — This was the ancient provision made by the king (or a lord) for supplying himself and following with food and other necessities, by a seizure of the goods desired. The history of this institution from the twelfth to the seventeenth century is well known and needs no further comment here, except that it was irregular² and sporadic, and was based upon the household and military needs of the king. Whether the goods seized were paid for depended much upon circumstances, the legislation sought to safeguard the subject in this respect.

Prise of merchants' goods. — Whilst general purveyance affected producers, the prise of merchandise touched chiefly middlemen; whilst the first was chiefly for household use, such as corn, beef, eggs, etc., the latter was primarily for the Great Wardrobe, and included such commodities as cloths and wax.

The earliest instance found of the prise of merchants' goods comes from the middle of the twelfth century. "Within the term of these three tides, the sheriff and the king's chamberlain are to come to the ship

¹ Below, p. 136.² One form of prise was regularly provided for, if not regularly levied: the prise which the constable of a castle could take from the people of the town in which the castle was situated, Ed. I, chap. 7.

and, if there is a vessel of gold or silver of Solomon work, or precious stones, or cloth of Constantinople or of Regensburg, or fine linen, or coats of mail from Mainz, they shall take them for the king's use, by the view and appraisal of the loyal merchants of London and within a fortnight pay the money."¹ This document shows clearly a normal case of prise, not a capture but an appraisement, not a mere seizure but an official purchase. All the articles were for the king's use.

My table of analysis of the prise has obviated discussion on many points of detail, but it is of the greatest importance to mark that local trade was not differentiated from foreign trade. The irregular prise was taken at fairs,² good towns, and sea-ports.³ In spite of what has been said to the contrary, that from general purveyance the prise was "extended to the case of commodities either exported from or imported into this country,"⁴ it is clear that the prise on merchants' goods partook more of the nature of a

¹ A London Municipal Collection of the Reign of John, Bateson, E. H. R., vol. xvii, pp. 496, 499. (Cf. Höhlbaum, *Hans. Urkundenbuch*, vol. iii, § 602.)

"Dedens le terme de ices tres itides deit le veskunte e le chamberlieng le rei venir a la nef e se il iad veismele dor u dargent del oure salemun v piers precieus v pailles de Costentinoble v. de Rencsburgh v cheinsil v walebrun de Maunce, sil prendrunt al oes le rei, par leagart e par le pris des leals marchants de Lundres, e a quinsaine rendre lur deniers."

² Infeng is explained as "Quite de prises en festes." *Expositiones vocabulorum*, Red Book of the Exchequer, vol. iii, p. 1035.

King Henry III, in the 30th year of his reign reserved for himself, when granting the tolls of the fair of St. Ives, the prise there. "Salvis nobis et hereditibus nostris pris in eisden" [*nundinis Sancti Yvonis*]. MS. Cart. Harl., 58, i, (10).

The king also granted in the same year to a merchant of Douay: "quod negotiari possit per totum Regnum Anglie faciendo rectas et debitas consuetudines. Ita quod nulla pris fiat ad opus Regis de pannis suis ab instantibus nundinis Sancti Botulfi anno etc. xxx usque in lli annos sequentes." Pat. R., 30 H. III, m. 4. Cf. Hall, *Custom-Revenue*, vol. ii, p. 86.

"De pris dominii regis nundinis et mercatis et civitatibus." Petition of the Barons, 1258 (Stubbs, *Select Charters*, p. 376).

³ "And concerning Prises made in Fairs, and good Towns, and in Ports for the King's great Wardrobe, the Takers shall have their common Warrant under the Great Seal." 28 Ed. I, chap. 2.

⁴ Hall, *Custom-Revenue*, vol. i, p. 61. Cf. Cunningham, *English Industry and Commerce* (4th ed.), vol. i, p. 276.

special tallage of merchants, comparable with that of Jews, than of the nature of custom duties. It resembled a tax on the moveables of one class of the community rather than a tax on articles of trade, and certainly articles of foreign trade as such were not considered at all.

Frequent reference was made in the thirteenth century to prises over and above those that were "ancient due and accustomed."¹ This applied to wines as well as to other commodities. But there is no evidence to show whether this was the use or the abuse of the prise. Freedom from either would have been a privilege of value.

By far the greatest interest centers about the abuse of the irregular or unsystematic prise, by which the prise might have been "drawn into a custom," that is, the prise might conceivably have become systematic.

It is well known that Henry III was more or less a wine-merchant, and that Edward I was on the highway to become a wool-monger. But the crown could never get very far in dealings of this kind. Only a few commodities lent themselves to such exploitation, and the king of England never became a merchant prince. It was in the levying of a money fine for exemption of merchandise from all prise that the irregular prise had some chance of becoming regular or systematic; since a money fine lends itself to systematic exaction and collection. But the only evidence found of such a development is in section 23 of the Petition of the Barons in 1258. From the preceding

¹ The merchants of Bordeaux in 1253-54 secured the exemption from all prises over and above the ancient prises of wines. *Cal. Pat. R., H. III, vol. iii, p. 294.* Likewise the men of Bourq-on-the-Sea received freedom in 1254 for three years from the super-prise on wines. *Ibid., vol. iv, p. 381.* In 1266, the men of Dieppe were freed from "prises, prests, and other exactions and demands, . . . except the king's due and ancient prises"; and the merchants of Lübeck were given similar exemptions, except when payment was immediately made to them. *Cal. Pat. R., H. III, 1258-66, p. 621; Höhlbaum, Hans. Urkundenbuch, vol. i, § 635.*

clause, however, it is evident that this had not gone far, that is, had not really supplanted the prise of goods itself.¹

The regular prises on merchants' goods were the often mentioned "due and accustomed prises" which, like the irregular ones, concerned local as well as foreign trade. The only article prized thus in foreign trade was wine.

The regular prise in the local trade was either a tax ("custuma ville") on local trade paid in kind, with which the crown was usually not directly concerned, or a prise for the upkeep of a castle. Examples of the former class are to be found in Sandwich,² Lynn,³ Berwick,⁴ and Chester,⁵ and of the latter in Worcester,⁶ and Bristol.⁷ The prise of the second class is further clearly set out for Newcastle,⁸ and indeed was regarded as a perfectly general right in 1317,⁹ and in the

¹ § 22. The king's takers of prises in fairs, markets, and towns are to be reasonable, and take only for the king's use. Complaint is made that they take two- and three-fold more than needed, and that they take for their own use and for their friends, and even sell a part.

§ 23. "Item conqueruntur quod dominus rex de prisais nullam fere facit pacationem, ita quod plures mercatores de regno Anglie ultra modum depauperentur, et alii mercatores extranei ea occasione subtrahunt se de veniendo in terram istam cum suis mercibus, unde terra magnam incurrit jacturam." Stubbs, *Select Charters*, pp. 376-377.

² MS. K. R. Customs, 157/12 (Ed. I). Port somewhat uncertain, but clearly on the east coast near London.

³ Gross, *Gild Merchant*, vol. ii, p. 157 (1335).

⁴ K. R. Customs, 193/2 (31 Ed. I).

⁵ MS. Harl. 2125, fol. 189 b [ca. 1560], a prise due "of ould tyme."

⁶ Cal. Ch. R., H. III, vol. i, p. 23 (1227).

⁷ Cal. Cl. R., H. III, vol. i, p. 257 (1229).

⁸ Altho in 1229 it was held that the local prise did not belong to the crown (Cal. Cl. R., H. III, vol. i, p. 152), in 1290 it was made clear that the king had, besides the recta pris on wine, a prise on herrings and haddocks. Rot. P., vol. i, p. 27 a.

⁹ No purveyance is to be made unless payment is rendered, "excepting the ancient prises of the king in places where the king's castles are situate according to Magna Carta and the other prises due to the king." Cal. Cl. R., Ed. II, 1313-13, p. 584.

reign of Henry VIII was still a regular practice in London.¹

From what has been said, it is evident that the "ancient prises due and accustomed" either had no reference to foreign trade, or were confined to one article of foreign trade, wine, clearly an exception.² The other prises were never systematized. Not only has no evidence been adduced by the sponsors of the prise theory, but I have found no additional support in the accounts of the exchequer or wardrobe, either particular or summary.

(b) *Prise commutations*. — The second stage in the prise theory is found in the period from Richard I to Edward I,³ when, it is alleged, the prise was commuted to a money payment. If the conclusions in the preceding section be correct, there is obviously no room for commutation. Nevertheless the evidence for prise commutation deserves examination.

The one example given of a tenth levied on merchants' goods belongs to 10 Richard I.⁴ But this, like an earlier case,⁵ is probably a tallage of a tenth.⁶ Certainly there is no evidence that it is a tax on trade as distinct from a tax on personal property.

The fifteenth is considered at length below.⁷ If our evidence fails us not, it belongs to the reign of

¹ Petition of wine merchants, alien and denizen, against the practice of the officials of the Tower of filling their great bottles of three pottles each with wine and loss from spilling. Merchants were willing to commute to a money payment. MS. K. R. Customs, 195/20.

² Below, p. 140.

³ Hall, *Custom-Revenue*, vol. i, p. 66, vol. ii, p. 133.

⁴ Hall, *Custom-Revenue*, vol. ii, p. 83. "De decimis mercatorum de pluribus mercaturis quas recipit per x dies in primo anno sicut dicit." MS. Pipe Roll, L.T.R., No. 44, m. 12 b.

⁵ Madox, vol. i, p. 775 (6-S R. I). "De Finibus et Decimis Mercatorum de Stagno et aliis Mercaturis apud Londoniam."

⁶ Cf. Madox, vol. i, p. 730 (6 R. I); also vol. i, pp. 726-727.

⁷ See p. 143.

John, has nothing to do with prises, and was abolished for good and all before the death of the king who instituted it. Madox¹ seems to have been the first to have coupled the tenth with the fifteenth, and most subsequent writers have found virtue in the association. Perhaps the original suggestion of the tenth and fifteenth as a trade duty came from the tenth and fifteenth on moveables, a wholly different tax.

(c) *The customs of 1275.* — In disposing of the first two points, we have virtually disposed of the others also. Yet for the purpose of continuing our examination of the third step in the prise theory, the commuted prise, the tenth and fifteenth, may be taken for granted; that is, the first links in the chain are to be provisionally accepted in order to test the third. The third link is that the grant of 1275 was merely an official confirmation of old dues, — dues now granted anew.² This is based upon two suppositions; first, that the customs of 1275 were called "ancient" at the time, and second, that they were levied upon a wider range of goods than specified in the grant.

The *Carta Mercatoria* of February 1, 1302-03, gives some clue on the first point. The term "ancient customs" occurs in three connections: first, with reference to the 2s. per tun duty on imported wine (later called butlerage), "beyond the ancient customs due and accustomed to be paid to us and others in money"; second, in connection with the increase over the ancient customs of 1275 on wool, wool-fells, and hides; and third, the increase of new customs "beyond the ancient customs formerly given to us

¹ Madox, vol. i, pp. 771-775.

² Cf. "Custuma vinorum ('ultra Antiquam Custumam unius denarii Regi vel aliis solvendam')." Hall, *Custom-Revenue*, vol. ii, p. 109.

or to others."¹ Besides these the wine prise, henceforth commuted to butlerage, may also be included as ancient customs.

Ancient customs at this time, then, were taken to be (a) the customs of 1275, and (b) another set, about which little is here made known except that they included a money duty on wine, a wine prise, and other dues payable to the crown and others, to which the burgesses of England had no objection, and which were therefore of definite meaning and well understood.²

In the *Carta Mercatoria* the customs of 1275 are called "ancient." Dowell maintains that they were so called for the first time in 1297,³ in the *Confirmatio Cartarum*, and this view has been accepted by others.⁴ But Mr. Hall uses the term "*Antiqua Custuma*"

¹ If this phrase in the *Carta Mercatoria* referred solely to the poundage on aliens' exports, then it would not be placed where it is, but after "*argenti*," as in the cases where it occurs elsewhere.

"Item, de quolibet sacco lanae, quem dicti mercatores, aut alii nomine ipsorum emunt, et de regno nostro educent, aut emi et edduci facient, solvent quodraginta denarios, de incremento, ultra custumam antiquam dimidiæ marce, quæ prius fuerat persoluta: . . . Cumque, de præfatis mercatoribus, nonnulli eorum alias exerceant mercandias, ut de averio ponderis, et de aliis rebus subtilibus, sicut de pannis Tarsen', de serico, . . . et aliis rebus, et mercandis multimodis, quæ ad certam custumam facile poni non poterunt, fidei mercatores concesserunt dare nobis, et hæredibus nostris, de qualibet libra argenti aestimationis, . . . tres denarios de libra, in introitu rerum et mercandiarum ipsarum, in regnum et potestatem nostram prædicta, . . . ; et similiter tres denarios de qualibet libra argenti, in eductione quarumcumque rerum et mercandiarum hujusmodi, emptarum in regno et potestate nostra prædictis, ultra custumas antiquas, nobis, aut aliis, ante datas." Rymer, *Fœdera*, vol. ii, pt. ii, p. 748.

² Mr. Hall, however, in speaking of the customs about 1297 [-1303] refers to "an indefinite toll upon merchandise at the ports," and "a discretionary toll upon all merchandise." *Antiquary*, vol. vi, p. 63.

"It is probable that a customary percentage was charged on other merchandise also." Meredith, *Economic History of England*, p. 72.

Fleta (ed. 1647, p. 84) is similarly indefinite: "Item quod principales collectores custumarum, lanarum, coriorum, aliorum theoloniorum dictis terminis denarios Regis receptos liberentur ad Scaccarium."

³ *Sketch of the History of Taxation*, vol. i, p. 157. This seems to have been an attempt to harmonise Gilbert's assertion that he saw in the Tower a record of the customs of 1275, called "*nova custuma*" with the preconception that before 1302-03 they were called "ancient."

⁴ Kunze, *Hanseakten aus England*, p. xxxvii; Meredith, *Economic History of England*, p. 173.

as if such a designation held good from the very first, that is in 1275.¹ The earliest occurrence of the phrase anywhere found is in a printed document of the year 1297. It appears, however, that the phrase is not to be found in the original document itself, but proves to have been interpolated by Mr. Hall.² The term "*antiqua custuma*," having reference to the dues of 1275, in fact occurs first in the *Carta Mercatoria* itself. The "particulars" of customs accounts use the phrase "new customs," "*La novel custume*" or "*nova custuma*," in reference to the grant of 1275,³ up to the very day on which the *Carta Mercatoria* was issued.⁴ The original grant of 1275 does likewise,⁵ tho both Stubbs⁶ and Mr. Hall⁷ quote the *Irish* grant written in Latin, in which no general designation at all is found, in preference to the *English* grant in French, which contains the proper caption "new customs."

Tho surprise has been expressed that the customs of 1275 should have been called "new,"⁸ there is really no occasion for it apart from the fact of non-agreement with text-books. The simple explanation is that the customs being called "new" were "new,"⁹

¹ Social England, vol. ii, p. 104; Custom-Revenue, vol. i, pp. 67, 159, vol. ii, p. 90.

² Hall, Custom-Revenue, vol. ii, p. 38 n. For the correct reading see Madox, vol. i, p. 784 n.

³ MS. K. R. Customs, 55/1 (Hull); *ibid.*, 135/1 (Chichester). The latter document is nearly half decayed, but the former is in an excellent state of preservation.

⁴ For example, MS. K. R. Customs, 55/8. "*Rotulus Ricardi Oysel et Roberti de Barton custodum nove custume domini Edwardi Regis Anglie Illustris apud Kyngeston super Hull a die Pentecost' anno Regni predicti E. Regis Tricesimo primo.*"

⁵ MS. Fine Rolls, membs. 24 and 25; Parl. Writs, vol. i, p. 1.

⁶ Select Charters, p. 441.

⁷ Custom-Revenue, vol. i, p. 200.

⁸ Jenkes, Edward I, p. 175.

⁹ The circumstances giving rise to the establishment of the customs of 1275 are unknown. Sinclair (History of the Public Revenue, 3d ed., 1803, vol. i, p. 109) says that "Edward I . . . having seen during the course of his expedition to Palestine, with what facility considerable sums of money were levied, by way of custom, in foreign countries, he thought it would be a happy expedient for raising a revenue in his own kingdom."

and remained so until still newer ones were introduced, making those of 1275 seem old. The customs of 1275, then, could not have been old customs re-enacted, could not have been prise commutations confirmed by parliament.

Besides the exact name of the grant of 1275, it is important to know the commodities included. This would seem to present a matter of no difficulty, since the documents specifically mention wool, wool-fells, and hides. But modern interpretation has extended the scope of the levy to include provisions and minerals (tin and lead),¹ and indeed all exports,² which gives the dues of 1275 an importance and comprehensiveness far beyond usual acceptance. But such a view is untenable. The "particulars of account" of the "ancient" customs from 1275 onwards exist in great numbers, and never, among the scores which I have read, does a single article occur except wool, wool-fells, and hides.

It follows, then, that if prise commutations (tenths and fifteenths) were collected from goods in general (exported and imported), and the customs of 1275 from only three articles (exported), the grant of that year could not have been a parliamentary confirmation of the earlier dues. The customs of 1275 had, then, no connection with the prise commutations, and the latter had not only no beginning but (as well as therefore) no ending.

(d) *Later history of the prise.* — It is maintained that the new customs fixed by the *Carta Mercatoria* ended the period of general prises or prise commuta-

¹ Hall, *Custom-Revenue*, vol. i, pp. 5, 66: cf. *Antiquary*, vol. vi, p. 211. Elsewhere the same writer clearly confines the grant to the articles mentioned in the writ itself, as in his *Custom-Revenue*, vol. ii, p. 88.

² Stubbs, *Const. History of England* (ed. 1875), vol. ii, p. 593.

tions, so far as aliens were concerned.¹ The charter granted to the merchants of Aquitaine in 1302² specifically states, and to a less degree, the more general, as well as better known, *Carta Mercatoria* dated a few months later,³ that the prises both on wines and on other merchandise were henceforth to cease. The accepted explanation of the new customs would be unquestioned, if the prises referred to were systematic prises on general merchandise of foreign trade. But it has been indicated that no such system of prises existed. The foreign merchants granted the king new customs, not as a substitute system for prises except in the case of wine, but in return for many privileges, not the least of which, however, was the irregular prize, exemption from the occasional seizure of their goods in fairs, ports, and towns.

But according to what has become the orthodox view,⁴ these prises continued to be exacted from denizens, who foolishly refused the new customs of 1302-03; and they were abolished only under pressure from a parliament of growing influence and power. In other words, — perhaps we may so put it, — they continued till a parliamentary system of customs had been worked out between 1302-03 and 1347. But if the above explanation of prises is correct, there were none to commute, except those irregular prises and purveyances which lasted down to modern times, or those systematic

¹ Hall, Custom-Revenue, vol. ii, p. 119.

² *Carta "de Libertatibus concessis Mercatoribus Vinetariis de Ducatu Aquitanie,"* 30 Aug., 30 Ed. I. Red Book of the Exch., vol. iii, pp. 1060 ff. The king agreed not to exact any "prisam vel quameunque aliam vinorum vel aliorum mercimoniorum" except on immediate payment or satisfaction therefor.

³ *Carta Mercatoria*, Hall, Custom-Revenue, vol. ii, p. 204. The king consented to make "nullam Prisam vel Arrestacionem seu dilacionem occasione Prixe de cetero de Mercimoniis, Mercandisiis seu aliis Bonis" without immediate payment at the market price. Cf. also *ibid.*, pp. 207-208.

⁴ Cf. Hall, Custom-Revenue, vol. ii, p. 134.

local prises and the regular prise on imported wine, both of which likewise lasted to the modern period. The burgesses of forty-two towns in 1303 refused the new customs, not because they liked prises, but because as conditions then were, they were subject to no prises or any other regular dues except "the duties of old due and accustomed,"¹ which they were content to pay. What these were will be seen below.

Every step of the argument is erroneous,—prise, commuted prise (tenth and fifteenth), the all inclusive ("ancient") customs of 1275, new customs of 1302-03 as commutation of prises due from aliens, the refusal of denizens to commute in 1303, and the later decay of prises due to the growth of parliamentary power.

II

LOCAL CUSTOMS

Local customs in England were much the same as those on the Continent, except that in England there was, of course, nothing quite analogous to the local territorial system.

Of the numerous English local customs (*consuetudines*) only a few are important here: river tolls, passage dues, and town customs.

Of river tolls little is known except that they existed. On the Thames there was an "*Avalagium Thamisiae*," a "*Consuetudo Navium per Tamisam*," a "*theloneum Maereni nostri carciati per avalagium Tamisiae*."² Likewise at Abingdon each ship of Oxford using the river paid its toll in fish.³

¹ Stubbs, *Select Charters*, p. 490.

² Madox, vol. i, p. 775 (19 H. II and 32 H. III).

³ *Hist. Mon. de Abingdon* (R. S.), vol. ii, p. 119 (H. I).

Besides having to pay to cross a bridge, or use a ferry, the traveller had to pay head-money,¹ or as it was early called "passage."² This was a due either for crossing a river³ or passing through a port town,⁴ and is as old as the Conquest at least.⁵ So important was this toll that nearly all charters to towns and monasteries contained exemptions from it.

It is the sea-port town dues, however, which are of greatest interest here. These were of many kinds, the chief of which may be put into more or less distinct categories: first, such dues as murage and paviage which were for local utilities; second, anchorage, strandage, etc., for a special local privilege; third, pesage, crantage, etc., for a local service rendered; and last, the town toll, later called "custuma ville."

The "custuma ville" was the general town due paid on goods for sale,⁶ for no special use, service, nor privilege, but leviable as a local or municipal right. It is to be compared and contrasted with the national customs revenue, as the local customs *par excellence*, to which all other town dues were subsidiary.

¹ MS. K. R. Customs, 133/7 (Sandwich, 6-7 Elis.). The "head-money" account replaces the old "passagium." At times "passage" was on horses, carts, and merchandise as well as on individuals. *Abbreviatio Rot. Orig.*, vol. i, p. 227 (Ed. II).

² MS. Eccl. Com., Var., 44/159403 (1396-97). One farthing was charged in the account of the maner of Witney "for water passage at Babelak for the free passage of the lord and his falcons for a year."

³ Records of the Borough of Nottingham, vol. i, pp. 2-5 (1155-65). A toll "de omnibus Trentam transuntibus."

⁴ MS. K. R. Customs, 157/12 (Sandwich, Ed. I).

"Naves passagientes quando applicantes apud Sandwycom] quilibet homo nisi
elit de franchisia [11 d.]
Judeus dabit [1111 d.]"

⁵ Domesday Book, vol. i, p. 273.

⁶ Only goods for sale paid local customs. In the London list of dues [Ed. I?] each item has "venalis" placed after it. MS. K. R. Customs, 193/3. The jury, too, presented that tho the men of Southampton paid toll at the vill of Crydinton, they never paid on goods there bought for their own use. *Abbreviatio Placitorum*, p. 210 (14 Ed. I).

The history of the "custuma ville" may be studied from about the eighth century down to modern times, in charters of grant and exemptions, general and summary accounts of collectors, and legislative enactments. But the history of the local customs has little interest here apart from the following rough periods of its development: 800-1100, inception and growth; 1100-1550, numerous exemptions; 1550-1835, great decay on account of rise of prices and the spirit of national economy; 1835 to the present, consolidation and restoration.

Speculation as to the original source of the power to impose local taxes is almost fruitless. During the greater part of the first period, the crown successfully maintained its prerogative right to grant such local customs, and certainly from that time to the modern period, that power has never been gainsaid. But on the other hand, the locality had an activity and vitality of its own, apart from the legal theory of sovereignty. It would not be far wrong to say that whilst some formulation came from above under the ægis of the Roman law, nevertheless, the germination of the movement was not only within the theory but independent of it.¹ As evidence of this there are numerous cases of the unauthorized imposition of new tolls,² the increase in old rates,³ and the leagues of towns creating inter-municipal free-trade unions.⁴

¹ Cf. the case of London, 1616. The citizens claimed that by virtue of charter they "have and doe receive and take tolle and tallage and thoroughtoll," but they hold wheelage "by antient prescription and not by force of any graunte." MS. in Guildhall, London, *Jer. C. C.*, vol. xxxi, p. 49.

² Domesday Book, vol. i, pp. 315, 375, 376; Bracton, *De Legibus Anglie*, vol. i, p. 247 (inquiry concerning new levies of customs, a crown plea); Hundred Rolls, vol. i, p. 133 b; *State Trials of the Reign of Ed. I.*, pp. 174-175 (1289-93).

³ 22 H. VIII, chap. 8; MS. St. P., Dom., Jac. I, vol. lxxxviii, No. 54.

⁴ Marlboro and Southampton, 23 H. III, Gross, *Gild Merchant*, vol. ii, pp. 173-174; London and Winchester, 1304, *ibid.*, p. 258; Salisbury and Southampton, 1330, Ashley, *Economic History of England*, vol. ii, p. 45; Nottingham, Coventry, and Lincoln, 15th century, *ibid.*; Dunwich and Hull, 37 H. VI, MS. Add. Ch., 40680.

But difficult tho it be to estimate the part played by the crown in the origin of the financial organization of town economy, it is easy to estimate its part in the gradual process of breaking down that system, which came about to some extent through the practice of exemptions. The system of exemptions was at once the strength and weakness of the local customs. In so far as the chief men of the town, either all the citizens¹ or the members of the Gild Merchant,² were exempt from the local customs, a powerful force was created for their continuance, since it was also the continuance of an exemption of considerable importance to those favored. Hand in hand with this went the exemption from the customs of other towns,³ which was ample reason on the part of the favored for the whole system, but obviously weakened it as a financial system. Of greater importance in the undermining of the local system was the practice of granting exemptions to religious houses⁴ and organizations,⁵ as well as to tenants on the royal demesne⁶ and other private individuals.⁷ In all, the list of exemptions was so

¹ Charter of London, H. I, in Stubbs, *Select Charters*, p. 103; Ipswich, 1200, Gross, *Gild Merchant*, vol. ii, p. 115. Cf. Ghent, 1199, Warnkönig, vol. ii, p. 20.

² E. g., Leicester, 1278, *Records of Leicester* (ed. Bateson), 1103-1327, p. 171. Cf. St. Omer, 1127, Giry, p. 372.

³ E. g., Dover, 1066, *Domesday Book*, vol. i, p. 1a, exemption from toll throughout England; London (H. I), Stubbs, *Select Charters*, p. 103; Nottingham, 1189, *Records of Nottingham* (ed. Stevenson), vol. i, p. 9. Cf. exemption of the men of the church of Strasburg, 775, Keutgen, *Urk. sur Stat. Verfassungsgesch.*, p. 40; also the exemptions of Flemish towns in Warnkönig, vol. ii, pt. 2, p. 4, Dam, 1180, p. 72, Furnes, 1176, p. 9, Nieupoort, 1168, p. 91.

Beverley received, temp. H. I, exemption from tolls throughout Yorkshire, Gross, *Gild Merchant*, vol. ii, p. 21.

⁴ E. g., Abingdon, *Hist. Mon. de Abingdon*, p. 218 (H. II); Christchurch, Canterbury, *Cal. Pat. R.*, Ed. I, vol. i, p. 344 (1279); Kemble, *Saxons in England*, vol. ii, pp. 75-76; cf. Keutgen, *Urk. sur Stat. Verfassungsgesch.*, p. 50 (1149).

⁵ Notably the Templars, *Rot. Cart.*, vol. i, p. 1 (1199).

⁶ *Abbreviatio Placitorum*, p. 305 b (2 Ed. II); Close R., No. 217 (4 John, 1 R. II); *Select Cases in the Star Chamber* (Selden Soc.), p. 121 (1517).

⁷ Davies, *History of Southampton*, pp. 228-230.

considerable¹ that it was chiefly aliens,² and a few of the poorer denizens without the town who paid the town customs.

If we were to compare the local customs of 1200 with those of 1900, we should note that, while at the earlier date, there were many exemptions, at the latter date there were practically none; that many dues of the twelfth and thirteenth centuries were later consolidated, and that the local rates on such goods as bore both local and national customs were much higher in proportion at the earlier date than at the later. In the thirteenth and fourteenth centuries, as now, the local rate was lower than the national.

<i>Local</i>		<i>National</i>	
[London, Ed. I.]	0.8% ³	Fifteenth of John.	6.6%
Sandwich, 6 Elis.	0.8% ⁴	Poundage of 1302-03.	1.2%
		Poundage of Ed. III.	2.5%
		Poundage of 15th cent.	5.0%

But this difference is not at all essential, resulting as it did from the fact that the local tax was fixed at an earlier date than the national, that is, much before the rise of prices of the twelfth and thirteenth centuries.

Just as national tariffs discriminate against nations, so local tariffs discriminated against towns. For instance Dunwich charged one shilling more on a ship of Walberswick than on one from Southwold.⁵ This local discrimination might take the form of favoring a

¹ Boys, *History of Sandwich*, p. 440. Exempt in Sandwich (13th century?) were: (a) those of the Cinque Ports and their members, (b) those soot and lot of Canterbury, (c) as well as of London, (d) the people of the archbishop of Canterbury, (e) the pot-boilers of the archbishopric, (f) those of the hundred of Milton, (g) those of Battle, (h) St. Albans, (i) Antwerp, (j) Gynes (Guines), and (k) Sir Ingeram de Fyenes.

² Some aliens were also exempt, for instance, the merchants of Scotland, 1237; Hölbaum, *Hans. Urkundenbuch*, vol. i, § 281.

³ MS. K. R. Customs, 193/3. Rates specific. "Et sic de qualibet alia mercandiam superius non nominata precii xx s. — li d."

⁴ MS. K. R. Customs, 133/7.

⁵ MS. Add. Roll, 40736 (19-20 Ed. I).

foreign town or nation against an English town, as in the case of Sandwich, which charged more on fish going towards the Thames (to London) than on fish going to France or elsewhere abroad;¹ the idea apparently being to tax all non-freemen engaging in the London trade very heavily so as to reserve that trade for the burgesses of the town.

This discrimination leads us to the essential difference between national and local customs. The former were only on foreign trade, and the latter on all trade in and out of the town, regardless of political boundaries. To this difference must be added the fact that while national customs rates were determined by the central government, the local rates, no matter what the ultimate source of the imposition, depended upon local organization for their working out, for they were the dues which custom had imposed, and differed as between town and town in particulars, tho inter-town and inter-port trade tended to level the discrepancies of rates.

It is evident, then, that local customs, the "petty customs" of the towns, were distinct in nature from the national customs. Bynostretch of the imagination or misinterpretation of facts can the local customs be expanded into national customs. Yet it is in part the thesis of this paper that no account of the origins of the national system can be adequate without taking the local system into consideration. Whilst the national customs-revenue was not based upon the local, the latter system was the most important single element affecting the early development of the national system.

¹ MS. K. R. Customs, 157/12 (ca. 1300).

" <i>Lasta allecium versus Tamisiam</i>	x d.
<i>Item versus Franciam</i>	liii d.
<i>M de Makereel versus Tamisiam</i>	x d.
<i>Versus partes transmarinas</i>	liii d."

III

SEMI-NATIONAL CUSTOMS 1050-1275

The formulation of the problem connected with the origin of the national customs system is very simple: what were the earliest dues upon foreign trade imposed by the king in his political capacity; that is, customs levied on goods exported and imported, and collected at the ports generally, in ports of private franchise as well as in those of the demesne?

The immediate task is to examine the early dues which, wholly or in part, answer to this formula. It is not to be expected that the purely national customs are to be found in the earliest times when the local system was predominant; but on the other hand, national elements are discoverable which deserve a prominent place in the history of custom origins. Four customs in this connection are important: lastage, scavage, wine customs, and prise of wines, all of which partake of the nature of both local and national customs. For lack of a better phrase, I call them semi-national.

(a) *Lastage*. Some half dozen meanings of lastage have been collected,¹ three of which are of interest here. It has been defined by lexicographers, medieval² and modern,³ as well as by modern historians⁴ and editors of texts, as a "custom exacted in fairs and

¹ New Oxford Dictionary, s.v. "Lastage."

² Liber de Hyda, p. 44; Expositiones vocabulorum, Red Book of the Exch., vol. iii, p. 1033.

³ Spelman, Glossarium (ed. 1687), p. 351; Du Cange, s.v. "Lastage."

⁴ Speed, History of Southampton (ed. Aubrey), p. 237 n.; Introduction to the Pipe Rolls, vol. iii, p. 85; Walford, Fairs, Past and Present, p. 20.

markets."¹ But I have found no clear example of such a use in any contemporary records or accounts of fair dues;² and at times in the records lastage is even set apart from and contrasted with the fair dues.³ Another meaning given to lastage is ballastage, or a payment for the privilege of taking in ballast.⁴ That this was one of the uses of the term, there is no doubt. But the lastage of moment here was not a fair due, not collected inland but "along the sea-coast,"⁵ a due paid by ships leaving port with cargoes of regular merchandise not of ballast-stones, and not paid at a rate of so much per ton or per ship, but at a specific rate on each article.⁶

The earliest occurrence of this lastage is in the Chester customs of the time of the Confessor.⁷ In the Pipe Rolls it is often found, as in 1130,⁸ 1155-56, 1157-58, 1158-59, 1171-72,¹⁰ and so on into the thirteenth century.¹¹ The towns mentioned are all on the sea-coast: Exeter, Hastings, Bosham, and Sandwich.

¹ Thorpe, *Ancient Laws and Institutes*, Glossary; Gross, *Gild Merchant*, vol. ii, p. 409; Riley, *Liber Custumarum*, vol. ii, p. 812. "A custom exacted in markets and fairs, for licence to carry goods from place to place, in the form of a package or last."

² Tolls at the fair of St. Giles, Winchester, 1297-98: gate tolls, magnum pondus, terragium, bovagium, soldagium, entrance and other dues. MS. Eccl. Com., Var., 27/159317. Cf. *ibid.*, 23/159286 (1292-93); MS. K. R. Accounts, 507/2 (17 Ed. II). For St. Ives, see MS. Cart. Harl., 58, i (10), 30 H. III; Gross, *Law Merchant* (Selden Soc.), I.

³ Pipe R., H. I, p. 153. "De Lestagio Civitatis [Exonie] 60s., De Feria Exonie 60s."

⁴ Godefroi, *Dictionnaire*, s.v. "Lestage"; Palmer's *Continuation of Manship's Hist. of Yarmouth*, p. 7.

⁵ Gross, *Gild Merchant*, vol. ii, p. 279 (1200).

⁶ MS. K. R. Customs, 16/17a, Skirbeck (Boston, 1323); *ibid.*, 124/6 Sandwich, 1302-03.

⁷ "Si vero cum pace et licentia regis venisset, qui in ea erant quieto vendebant quae habebant. Sed cum discederet, illi denarios de unoquoque Lesth habebant rex et comes." *Domesday Book*, vol. i, p. 262 b. See also a manuscript of the year 1852 in the Lynn archives (nondescript) which places the origin at the time of Stephen.

⁸ Pipe Roll, H. I, pp. 91, 153.

⁹ *Ibid.*, pp. 48, 61 (2 H. II), 75, 79 (3 H. II), 131, 153, 159, 182 (4 H. II).

¹⁰ *Ibid.*, 18 H. II, p. 98.

¹¹ Rot. Can., 3 John, p. 214; MS. Pipe R., L.T.R., No. 50, m. 7a (6 John); *ibid.*, No. 62, m. 9a (2 H. III).

The lastage of at least four towns, Boston, Lynn, Yarmouth, and Ipswich, was in the hands of the Hauville family, where it continued apparently about a century following the year 1217,¹ and in case of Yarmouth was still in private hands in the year 21 Richard II (1397-98).² The tenure of this fee was the serjeanty of receiving the king's presents, especially falcons.³

It is difficult to decide, owing to the badly arranged text of *Liber Albus*, whether this fast disappearing due was collected at London. Under the caption "Tronage," we find the first section dealing, not with the tronage of wool, but another custom on wool, etc., "taken out of London to the parts beyond sea, by merchants liable to custom."⁴

Thus it appears that lastage was collected at nine ports, and perhaps ten, all the way around the coast from Boston to Chester.

It happens that there have been handed down a list of lastage rates of about thirty different commodities for Skirbeck (Boston),⁵ and lastage accounts of the closing years of Edward I, for Sandwich.⁶ From these the nature of lastage may be determined. According to the Skirbeck document, lastage "arose from divers merchandises carried out of England to parts beyond

¹ Ralph of Yarmouth, in 1217, conveyed his right to lastage in Norfolk, Suffolk, and Lincolnshire to Henry de Hauville. Palmer's Continuation of Manchip's Hist. of Yarmouth, p. 7. In 1318, Robert de Walkere was pardoned for acquiring in fee, without licence, the lastage of Skirbeck (Boston) from Thomas de Hauville. Cal. Pat. R., Ed. II, vol. iii, p. 114. Cf. also Cal. of Inq., I, §§ 281, 337, 361 (39 and 40 H. III); *ibid.*, vol. § 381 (8 Ed. I); *Inquisitio ad Q. D.*, 135/10 (12 Ed. II); K. R. Customs, 16/17a (17 Ed. II).

² MS. Harl., 1878, 2b.

³ Cal. of Inq., vol. i, § 281; *Abbreviatio Placitorum*, p. 285.

⁴ *Liber Albus*, vol. i, p. 226.

⁵ MS. K. R. Customs, 16/17a. In Sandwich it seems that not so many goods paid lastage, the chief being wool, hides, butter, cheese, bacon, and fish. MS. K. R. Customs, 124/12 (31-32 Ed. I).

⁶ *Ibid.*, 124/5, 14.

seas."¹ And in the Sandwich accounts we see the three layers of customs, *custuma ville*, *lastagium*, and the *nova custuma* of 1302-03, all at times due upon the same articles of trade. Take an alien merchant exporting goods as an example. He paid *custuma ville* on all his goods, *lastage* upon the chief natural products of the country, and also the new customs on all his wares.²

Lastage resembled the local customs in that there were many exemptions in favor of the burgesses of numerous English towns,³ and of foreign merchants.⁴ Then too, as has been seen, it was put to farm, like local tolls, and granted out as fees. But *lastage* was not a local toll, not the *custuma ville* on exports, for the same goods going abroad paid both *lastage* and *custuma ville*,⁵ and indeed the rates were not the same,

¹ "Provenit ex diversis mercimoniis transfretantibus extra Angliam ad partes transmarinas." MS. K. R. Customs, 16/17a. Cf. Abbreviatio Placitorum, p. 285 (19 Ed. I). "Quandam consuetudinem vocatam lastagium de mercandisiis usque partes exteras transeuntibus."

² "Recepta custume de Sandwyco:"

"De Dyonisio Bell de Ipse pro IX dolia vini IIIa., pro IIII saccis Lane VIIIId., pro II balis alluciorum VIIIId., pro I granario Wode IIIId."

"De Johanne Froydecosine pro I bala Panni IIIId., pro II saccis Lane IIIId."

"Recepta custume Lastagi de Sandwyco:"

"De Dyonisio Belle de Ipse pro IIII saccis Lane XVIIId."

"De Johanne Froydecosine pro II saccis Lane VIIIId." (K. R. Customs, 124/14. Mich. 32 Ed. I—Mich. 32 Ed. I.)

"Particule Nove Custume recepte apud Sandwyco; Custuma lanarum, pellium lanutarum, et coriorum . . . de regno eductorum:"

"De Dionisio Bella de Ipse pro IIII saccis et III clavibus Lane—XIIIa. Vid qa."

"De Johanne Froydecosyn pro II saccis Lane VIa. VIIIId." (Accounts dealing with other articles exported are missing. MS. K. R. Customs 124/13. Mich. 32 Ed. I—Mich. 33 Ed. I.)

³ London, Stubbs, Select Charters, p. 103 (H. I); Norwich, Rec. of Norwich (ed. Hudson), vol. i, p. 12 (1194); Lincoln, Rot. Chart., vol. i, p. 4a (1199).

⁴ The men of St. Omer "sint quieti per totam Angliam undecumque venerint, de lastagio." Giry, St. Omer, p. 381 (1154-62).

In Skirbeck the jury said: "Iste predictae consuetudines percipiendae sunt de omnibus hominibus cum predictis rebus transfretantibus exceptis hominibus de Gutland, de Fryesby in Friseland, de Northweya, de Scotia, de Hibernia, de Colonia, et de hominibus de London, et de pluribus aliis mercatoribus, videlicet, Johanne Martyn de Setham et aliis." (MS. K. R. Customs, 16/17a (1323).)

⁵ MS. K. R. Customs, 124/5 (27 Ed. I), and 124/14 (32-33 Ed. I).

tho the variation was not considerable.¹ Hence we are forced to make a new category for lastage. In the two essentials of foreign trade and political imposition it was a national due; but in secondary characteristics, — exemptions and feudation, — it was local. Lastage, then, was a semi-national customs-due.

(b) *Scavage*. Scavage was a custom, as *Liber Albus* twice makes known, due only on wares imported from abroad.² From a list of merchandise imported from the Continent on which scavage was due, we learn that it was levied only on foreign goods, such as spices, fruits, mercery, etc.³ Like lastage, it was collected only on articles of foreign trade and was payable originally to the king.⁴ But unlike lastage, it seems to have been confined to London. At least it seems not to have had general application elsewhere, tho the term is treated in a medieval glossary as if of general use.⁵ As in the case of lastage, there were many who owed no scavage,⁶ and since those who paid it were forced to live with hosts, we may conclude that it was non-freemen who were liable, tho it is clear that some

Articles	Lastage	Costuma ville
Bacons, each	1d.	1d.
Cheese, wey	1d.	1d.
Herrings, last	1d.	4d.
Hides, dicker	2d.	2d.
Wool, sack	4d.	2d.

MS. K. R. Customs, 124/12. Sandwich, 31-32 Ed. I.

¹ Vol. i, pp. 225, 230.

² *Liber Albus*, vol. i, p. 223. Spelman (*Glossarium*, ed. 1687, p. 503) defined scavage as "Tributum quod a mercatoribus exigere solvent nundinarum domini, ob licentiam proponendi ibidem venditioni mercimoniam. Cf. Du Cange, s. v. "Ostentio," and Thorpe, *Ancient Laws and Institutes*, Glossary.

³ *Liber Albus*, vol. i, p. 223.

⁴ "Scheauwyng, id est, Propositio mercimonii. Gallice, Displeyure de marchandise." *Liber de Hyda*, p. 43; "Shewite — Quite de moustraunce de marchandise." *Red Book of the Exch.*, vol. iii, p. 1033.

⁵ *Liber Albus*, vol. i, p. 225.

aliens were specially exempt.¹ In the thirteenth century, the rating was so much per load, or per "kark of merchandise."² At a later date it consisted of many minute and varying rates.³

The history of scavage can be followed from about the period of the Conquest to modern times. It comes to light for the first time in an obscure list of "customs of Billingsgate,"⁴ the date of which is uncertain but may be assigned to the eleventh century.⁵ During the following century, it was mentioned in a charter given to St. Omer.⁶ In 52 Henry III (1267-68), it was accounted for in the Pipe Roll.⁷ And in a list of London customs of the late thirteenth century, it is set forth at considerable length.⁸ It seems to have been due at Billingsgate, Queenhythe, and Dowgate, that is, wherever ships importing goods landed their cargoes.

But what chiefly interests us is the combination of national and local characteristics, which enables us to place it in the same category as lastage.

(c) *Ancient wine custom.* This due has been at least thrice noted by others, firstly, as "in the nature

¹ The merchants of Lorraine paid no other "escawenge" except the "wine custom." Höhlbaum, *Hans. Urkundenbuch*, vol. iii, § 602 (ca. 1150). "The merchants of Germany" were exempt. *Liber Albus*, vol. i, p. 225-226. The men of St. Omer were likewise freed from "scawinga" in London. Charter of H. II to St. Omer. *Giry*, *St. Omer*, p. 381 (1154-62).

² *Liber Albus*, vol. i, pp. 223-224, 230.

³ E. g., MS. Galba, C 1, fol. 228 ff. (H. VIII); Rates of the Custome House, 1590, pp. 47b-52; MS. Br. M., 12497 (1594); Birch, *Hist. Charters of London*, pp. 212 ff. (Car. I), unspecified goods to pay 1d per £.

⁴ "Hogge, Leodium, et Nivella, qui per terras ibant, ostensionem [scavage] dabant et teloneum." Höhlbaum, *Hans. Urkundenbuch*, vol. i, § 2.

It may be that "ostensio" is referred to in Domesday Book vol. i, p. 262b in the Chester customs: "Si habentes marinas pelles juberet praepositus regis ut nulli venderent donec sibi prius ostensas compararet."

⁵ Höhlbaum, *Hans. Urkundenbuch*, vol. i, § 2; vol. iii, § 509. The date is here given as about the last third of the 11th century.

⁶ *Giry*, *St. Omer*, p. 381 (1154-62).

⁷ 75£. ss. 10d. "de consuetudinibus omnimodum mercandiarum venientium de partibus transmarinis ad Civitatem praedictam, de quibus consuetudo debetur quae vocatur Scavagium." Madox, vol. i, p. 779 n.

⁸ *Liber Albus*, vol. i, p. 223.

of a port due"¹ (8d. per tun), secondly, as an excise (1d. per tun) and a local due,² and thirdly, as brokerage.³ But it seems that these views are not merely contradictory; they are all incorrect.

This wine custom was in reality an import duty payable in money and called as well "escawenge," or scavage, as "la custume del vin," and existed at least as early as about 1150 in London.⁴ In the London scavage rates of the sixteenth century wine is listed at 2d. per tun,⁵ a rate which was also given to the out ports,⁶ and probably to the metropolis,⁷ by Henry III. Two definite wine import duties were recognized by Henry III, one the *recta prisca*, and the other "the customs of pence imposed upon every tun in the divers ports."⁸ And in 1302, in the charter of liberties granted to the merchants of Aquitaine, a 2s. butlerage was substituted for the ancient prise, but this was "over and above the ancient customs due and accustomed to be paid in money either to us or to others."⁹ This was repeated in the *Carta Mercatoria*.¹⁰

Whilst the local due on wine was 4d. per tun,¹¹ this due was from the time of Henry III, as has been seen, only 2d. The information about this wine duty is scanty indeed, it seems fairly clear that it was a part of an early national customs system, a duty paid in

¹ Stubbs, *Const. History of England*, vol. ii, p. 550.

² Hall, *Custom-Revenue*, vol. i, p. 7; vol. ii, pp. 93, 109.

³ Bateson, *Engl. Hist. Rev.*, vol. xvii, p. 498.

⁴ Hölbaum, *Hans. Urkundenbuch*, vol. iii, § 602. The men of Lorraine "ne durront autre escawenge fors la custume del vin ceo est le cornage V [or II ?] deners de chescun tonel." E. H. R., vol. xvii, p. 501.

⁵ Rates of the Custome House, Br. M., C 40, b 29 (1590).

⁶ Cal. Cl. R., H. III, 1227-31, p. 153 (1229).

⁷ Liber Albus, vol. i, p. 228 (ca. H. III ?).

⁸ Cal. Pat. R., H. III, 1247-58, p. 370 (1254); cf. *ibid.*, iii, 294 (1253-54).

⁹ Red Book of the Exch., vol. iii, p. 1063.

¹⁰ Hall, *Custom-Revenue*, vol. ii, pp. 202 ff.

¹¹ MS. Claud. D, x, pp. 182b ff. (Sandwich); Woodruff, *Hist. of Fordwich*, p. 32; MS. K. R. Customs, 137/10 (Southampton, 13-14 Ed. III); cf. *ibid.*, 137/11 and 12.

the ports generally, in private¹ as well as royal² franchise, one in which the crown had a special interest, and never classed with local customs. Nevertheless it seems to have partaken of the local system in so far as local exemptions were concerned.³ It is not improbable that this money duty on wine is all that has come down to us of a scavage originally due in the outports as well as in London.

(d) *The prise of wines.* The prise of wines comes to light apparently for the first time about 1150, in the regulations for the men of Lorraine coming to London. "And if it is a ship, they will take two⁴ tuns behind the mast, and one before, the best for as much as they sell the mean. And the mean for as much as they sell the worst. And if it is a hulk or other boat, one tun before and another behind, the best for as much as they sell the mean. And the mean for as much as they sell the worst."⁵

From this document it appears that the amount of wine which the king might take was fixed according to the size of the ship. It is also to be noted that the king was to buy his wine at a little below the market price. It is not assumed that he will always buy the best, and indeed since some of it would doubtless be for his servants, why should he have done so, especially

¹ For example at Sandwich, in 1229. Cal. Cl. R., H. III, 1227-31, p. 153.

² As at London. Hans. Urkundenbuch, vol. iii, § 902 (ca. 1150). Also the ports of Yorkshire (?) "De Ca. et Villa. et LXd. et ob de denariis captis de vino, scilicet de Tonello IIIId." Madox, vol. i, p. 774 n. (Michaelmas, 12 John to Mid-Lent following).

³ Liber Albus, vol. i, p. 228 (c. H. III ?).

⁴ The Liber Ordinacionum, f. 161 b (E. H. R., vol. xvii, p. 500) has a corrupt reading. From the ship three tuns were due, and from the hulk four.

⁵ "E si co est chiel, li prendrunt deus tonels bas le tonge, e un devant, le meilleur pur altretant cum lom vendra le meien. Et le meien pur altretant cum lom vendra le peiur. E si co est hulk, u altre nef, un tunel devant e altre deriere, le meilleur pur altretant cum lom vendra le meien. E le meien pur altretant cum lom vendra le peiur." E. H. R., vol. xvii, p. 500. This is a better text than that printed by Riley or Höhlbaum. The date given by Höhlbaum and Miss Bateson is about a century earlier than that assigned by Riley.

when he had to pay for it? This regulation, or "law" as it was called, was for the king's benefit, a guarantee against extortion on the part of the merchant.

At about the same time, Rouen received a charter which laid down the principle that no wine duty was to be given in Rouen except wine itself.¹ And in 1199, John's charter to that town granted to the citizens certain privileges but stated that they should be subject to his prise of wines in London, which was defined as the pre-emption of only so much wine as was necessary for the king's use, that is "for his own drinking, or for giving away as he will, but not for selling."²

The wine prise so well known in history was the *recta prisā*. The earliest specific occurrence found of this phase is of the year 1202.³ Whilst the prise of 1150 was definite in amount, it was not fixed as to price. It is probable that some time in the reign of Henry II an assize, now lost, was issued, fixing for all England the price which the king should pay for his wine, 15s. in Bristol, and 20s. elsewhere,⁴ and likewise standardizing the amount for all ships at one tun before the mast and one after.⁵ So that a "*mala prisā*" of wines would be the pre-emption of more than one or two tuns, either at the regular price or otherwise, or the pre-emption of one or two tuns at any other than the "right prise."⁶

Even at the time of the determination of the *recta prisā*, no idea of a tax could have prevailed at all.

¹ Chéruel, *Histoire de Rouen*, vol. i, p. 241 ff.; Round, *Calendar of Documents in France*, vol. i, pp. 32-33.

² Round, *Calendar of Documents in France*, vol. i, p. 36.

³ "De vinis prædictis nullam prisam capiatis, præterquam rectam prisam nostram." Madox, vol. i, p. 767.

⁴ MS. K. R. Accounts, 352/15 (15-17 Ed. I); *ibid.*, 77/18 (8 Ed. II).

⁵ *Liber Custumarum*, vol. i, pp. 252-253 (53 H. III); *Fleta* (ed. 1647), 90 (ca. 1290).

⁶ There were taken for instance from Gascon merchants 27½ tuns @ 20s., and 37½ tuns @ 2½ marks, "ad opus nostrum." Rot. Lit. Cl., vol. i, p. 5 (1204).

At the time of the assize, 20s. per tun would not have been much, if at all, below an average price.¹ The duty on wine at the time was not the *recta pris*a but the ancient wine customs above considered. Time brought about a rise in prices and the *recta pris*a became a real tax. The *recta pris*a as a tax is historically an accident. The king became the beneficiary of an unearned increment.

The later history of the prise is well known. It was commuted into a money payment by the merchants of Aquitaine in 1302,² and by aliens in general in 1302-03.³ Only in the eighteenth century were denizens freed from the obligation.

The simple facts of importance in the early history of this prise have thus been stated. It remains to be seen what the accepted theory of wine prises is, for that theory is of importance in so far as it forms the analogy on which the general prise theory is founded.

Briefly, this accepted theory is as follows.⁴ Three distinct stages of development are found. (1) The first saw the king purchasing as much wine as he needed at a price "far below" the market value, "at the most, for half its market value."⁵ But as already seen, both the amount taken and the price were in fact limited, the former fixed according to the size of the ship, and the latter rated in definite terms of the market price. (2) Whilst in the first stage apparently aliens and denizens were lumped together, in the second stage they parted company.

¹ John's assize of wines, 1199, practically our only source of evidence, placed the maximum price of the wine of Poitou at 20s. per tun, of Anjou at 24s., and of France proper at 25s. Hovedon, vol. iv, p. 99.

² Carta de Libertatibus, Red Book of the Exch., vol. iii, pp. 1000 ff.

³ Carta Mercatoria, Hall, Custom-Revenue, vol. ii, pp. 202 ff.

⁴ Hall, Custom-Revenue, vol. ii, pp. 90-92.

⁵ Ibid., p. 63.

The denizens were subjected to a prise definite in amount, about a tenth, at the king's price. This was the *recta prisā*. But such is really a misconception of the term. The prise was "right," not so much because it was definite in amount (it had been so before, tho now that amount was standardized), as because the price per tun was fixed independently of market price. Stubbs originally defined the *recta prisā* with approximate correctness,¹ but yielding to criticism,² substituted the incorrect explanation,³ which has gained acceptance in other standard works.⁴

Not only has the *recta prisā* been wrongly defined as a prise of wines at the king's price, but it is even described as if it were an out and out "taking,"⁵ or seizure without payment.⁶ And indeed it has been remarked that "it is new to find that the king was expected at one time to pay for the wines of his butlerage."⁷ The prise was of course first and last a purchase of wines, differing from other purchases only in that it was official and took place according to prescribed rules. It is, again, a part of the theory that, in the second phase, aliens fined to the crown, in the shape of licence money, either in a "lump sum for the whole cargo," or as a "fixed toll," so much per tun. Not an iota of evidence is cited to support this hypothesis. No trace of such a toll has been found accounted for in the Pipe Rolls or in the Wardrobe accounts. And up to the time when the men of Aquitaine substituted

¹ Const. History of England (ed. 1875), vol. ii, p. 522.

² Hall, Antiquary, vol. vi (1882), p. 65; Custom-Revenue, vol. i, p. 6.

³ Const. History of England (4th ed.) vol. ii, p. 550.

⁴ E. g., Cunningham, English Industry and Commerce (4th ed.), vol. i, p. 279.

⁵ Hall, Antiquary, vol. vi (1882), p. 65.

⁶ Cunningham, English Industry and Commerce (4th ed.), vol. i, p. 279; Meredith, Economic History of England, p. 72.

⁷ Bateson, English Hist. Rev., vol. xvii, p. 497.

If the description of the above several dues is correct, there existed in the twelfth century or earlier a more or less complete set of national customs, some of which continued locally down to modern times, but most of which early but gradually sank into desuetude before the later and better known customs. This was facilitated by the great rise of prices in the thirteenth century,¹ which reduced the importance of the existing customs and made the introduction of others possible. Their decay was furthered by the fact that no special machinery had been created for their supervision. Hand in hand with this went the all-powerful localism of the time. Following the first group, the local customs, was this second set of "ancient customs," hitherto unrecognized, which, however, are those mentioned in the *Magna Carta*, *Carta Mercatoria*, and other documents of the period.

Once this analysis of the ancient customs is accepted there is no room for the prise theory with its accompanying commutations and indefinite tolls. A faithful student of the medieval financial history of England has expressed some impatience with the accounts of the ancient customs. "We have heard," he writes, "of imposts of 10 per cent and $7\frac{1}{2}$ per cent (tenths and fifteenths) on divers articles; of a primeval duty of 4d. or 8d. on the tun of wines; of the king's Prisée of wines. . . . But the notices were too scattered to enable us to give any connected view of the whole."² The account of the customs given above explains why they are "scattered;" nothing else is to be looked for in the debris left by the conflict of systems and ideas, local and national.

¹ This subject will receive special treatment on another occasion.

² Ramsay, *Dawn of the Constitution*, p. 314.

IV

THE CUSTOMS EXPERIMENT OF KING JOHN

The well-known fifteenths of history have been either tallages or general taxes on moveables. The fifteenth of John, of interest here, an innovation and experiment of that king, was an *ad valorem* tax on foreign trade imposed by the crown and of general application throughout England. It has already been seen that the fifteenth as a *prise* commutation is a myth, and the statement that "customs on general merchandise were collected in the shape of a fifteenth or other sum levied very much as a toll or licence to trade,"¹ is beside the mark. The fifteenth was neither licence money, nor was it found except for a few years in the reign of John. The fifteenth was likewise not on "both lands and goods,"² but on goods alone and only when exported or imported. Apart from the historians quoted, apparently only two have more than noted the fifteenth, — Madox, who printed some accounts,³ and Faber, who gave a summary of the regulations.⁴ Otherwise this notable attempt of John to found a new customs system seems to have been forgotten. At the time when John was in desperate straits for money and daily losing ground in France, he not only resorted to irregular levies upon articles of trade, but also introduced the new *ad valorem* tax, the fifteenth. This made its appearance, more precisely, June 4, 1203. It probably disappeared sometime be-

¹ Stubbs, *Const. History of England* (4th ed.), vol. ii, p. 550.

² Thompson, *Collections of Boston*, p. 101.

³ *History and Antiquities of the Exchequer*, vol. i, pp. 771-773.

⁴ *Agrarschuts in England*, pp. 62-64.

tween the ninth¹ and twelfth² years (1207-10) of the same reign.

The Great Winchester Assize of Customs, which outlines the whole system, was enrolled as a letter patent, and is among the earliest of its kind preserved in England, tho the original roll is in places now much less legible than the printed document.³ The essential features of the new system may be briefly summarized. It was decreed "by the advice of our liegemen" that all merchants shall pay to the king a fifteenth of their merchandise exported or imported; that in each port six or more collectors be elected who are to be under the control of the chief custodians of the fifteenth; that the usual machinery of common chest, tallies, and chirographs be adopted; that special provision be made for coast-traders, who are to find security for the performance of their legitimate functions;⁴ and that the exportation of victuals and other specified commodities be forbidden unless under licence.

Altho but little importance is to be attached to the phrase "by the advice of our liegemen," still its presence indicates that some attempt was made to secure the sanction of officials or magnates. From the phrase as it stands, one may conclude that probably only the narrower group of magnates, those immediately about the king, rather than any large assembly assented to the plan. This is the more likely to have been the case

¹ London's exemption. Madox, vol. i, p. 773 n.

² Account of the custodians of the sea-ports (and of the fifteenth), omitting all mention of the fifteenth. Madox, vol. i, pp. 773-774.

³ Rot. Lit. Pat., vol. i, pp. 42-44.

⁴ For the working out of this provision, see *Abbreviatio Placitorum*, p. 94 (temp. John, year unknown). A jury of the men of Portsmouth gave evidence concerning three ships leaving their port: one was from Rochelle and had paid the fifteenth, the second came from Exeter and bore a certificate that the fifteenth had been paid at Dartmouth, and the third was from Winchelsea with wine, of which pledges had been taken (as guarantees in the coast trade).

as the king was at the time waging war on the Continent.

The system was evidently regarded as a permanent institution. No time limit occurs in the assize; special machinery was established; and in the ninth year of John, London paid a fine of 200 marks to be freed from payment.¹

In the creation of the special machinery for carrying out the assize, the later and more permanent system of customs was anticipated at many points. Collectors (bailiffs) took the money, and had charge of the machinery generally. Comptrollers kept a counter-roll and in other ways acted as a check upon the bailiffs. Accounts were turned in to the exchequer and coast certificates were issued, as at a later date.

Since contemporary historians passed over in silence this experiment in customs establishment, which might be expected to have aroused their attention, one is inclined to question whether the system was ever put to a test. But the summary accounts of the money collected, enrolled in the Pipe Roll,² dispel such a

¹ Madox, vol. i, p. 773 n.

² *Computus Willelmi de Wrotham Archidiaconi de Tanton et Reginald de Cornhull et Willelmi de Furnell de Quindena Mercatorum per portus maris:*

Newcastle	£158 8 11	Orford	£ 11 7 0
Jarrow	42 17 10	Ipswich	7 11 7½
Cotun	0 11 11	Colchester	16 12 8
Whitby	0 4 0	Sandwich	16 0 0
Scarboro	22 0 4½	Dover	32 6 1
Hedun	60 8 4	Rye	10 13 5½
Hull	344 14 4½	Winchelsea	62 2 4½
York	175 8 10	Pevensey	1 1 11½
Selby	17 11 8	Seaford	12 12 2
Lincoln	657 12 2	Shoreham	20 4 9
Barton	33 11 9	Chichester	23 6 7
Ymmingham	18 15 10½	Southampton	712 3 7½
Grimsby	91 15 0½	Exmouth	14 6 3
Boston	780 15 3	Dartmouth	3 0 0
Lynn	651 11 11	Esse	7 4 8
Yarmouth	54 15 6	Fowey	48 15 11
Norwich	6 19 10	London	836 12 10
Dunwich	5 4 9	Total	4958 7 3½

MS. Pipe Roll, L. T. R., No. 50, memb. 12 b (30 July, 1203-30 Nov., 1205).

doubt. For the first time, we find recorded the "customs of England,"¹ in reference to indirect taxes on trade. This was not a mere phrase; it was a reality. Nearly all England was embraced; and besides, only goods of export or import were liable to the duty. Coastwise trade was specifically exempt, and no provisions existed for the collection of the fifteenth elsewhere than on the sea-coast by the custodians of the ports and their agents.

But the fifteenth did not wholly rise above the prevailing practice of the time: it suffered to some extent from exemptions, as did the earlier set of dues, for, as has been seen, both denizens (Londoners)² and aliens³ secured freedom from paying the tax.

Since none of the details of the "taking off" of the system have come down to us, we are left to conjecture the causes. Two features may be pointed out: the high rate, 6½ per cent, about three times the local rate; and the comparative freedom from local exemption. This latter was at once its strength as a system, and its weakness in that it ran counter to the localism of the period. It is probable that the whole system degenerated into one of extortionate licence fees. The maltolts of the Great Charter were doubtless the fees for licences mentioned in the Assize of Winchester.

¹ "Consuetudines Angliæ," Rot. Lit. Pat., 43 b.

² Madox, vol. i, p. 773 n.

³ "Rex, etc., Willelmo de Wrotham et sociis suis etc. Mandamus vobis quod quietis mercatores de Norweg quindena de mercandisiis suis." 5 Sep., 6 John, Rot. Lit. Cl., vol. i, p. 7a.

V

CONCLUSION

During the period 1215-75, there were thus three prominent customs features, (a) local customs, (b) semi-national customs, and (c) a revival or continuance of John's irregular levies upon articles of trade, a practice systematic only in its irregularity, and in no way leading to a customs establishment.

We are now in a position to draw up a list of the customs according to the classification here adopted.

Schedule of customs:

- I. Local (about 8th century onwards):
 - (a) For general use, *custuma ville*.
 - (b) For a service, *e. g.* *pesage*.
 - (c) For a privilege, *e. g.* *strandage*.
 - (d) For a utility, *e. g.* *murage*.
- II. Semi-national (about 1050 onwards):
 - (a) *Lastage*.
 - (b) *Scavage*.
 - (c) Ancient wine customs.
 - (d) *Prise of wines*.
- III. National (from 1203 and 1275 onwards):
 - (a) Customs of King John.
 - (b) Customs of 1275.
 - (c) New Customs of 1302-03.
 - (d) Wool subsidy.
 - (e) Tonnage and poundage.

} irregular,
Ed. III following.

Until 1203, we may say, all efforts to establish a national customs system failed because of the strength of local organization. The system was set afoot but, where it did not die out through lack of trade or other unfavorable condition, it was modified to fit in with an all-pervading localism.

Between 1203 and 1347, the crown gradually did establish a national system apart from the local system,

but the progress was uphill, and accompanied with many reverses. John's attempt at erecting a complete system was never repeated. Henry III adopted to some extent the device of irregular pre-emptions of certain goods for sale again. No success attended his efforts to erect this into a system. At the same time licence fees continued to be exacted from denizen and alien merchants. But this too was not systematized, indeed never was in English history, except in the reigns of John and Elizabeth. It was only in 1275 that the corner stone of the later and well-known system was laid, tho the scope of the grant of that year was very limited. One other stone was laid by the *Carta Mercatoria* in 1302-03, but only aliens were subject to the new customs imposed. The rest of the structure was left for Edward III to erect, and for his successors to consolidate. The work was done only by strong hands and piecemeal, but it was done surely; no local privileges were allowed to stand.

The earlier set of customs had some chance of living on just because they were localized. The later ones brought on violent reactions because the local system found no place within the new scheme. Privileged burghers, especially those of London and the Cinque Ports, did not like the prospects of paying indirect taxes where formerly they had been wholly exempt. Only in the case of the parliamentary grant of 1275 did the local hierarchies acquiesce without struggle. The combined forces of decadent localism and nascent constitutionalism stood out against financial innovation. The reactions of 1215, 1258, 1297, 1303, 1311, and 1347 are landmarks in the conflict.

It is not a solecism, as Gilbert maintained, to speak of the origin of the customs, if we mean the national customs system. That origin is to be found in definite

duties imposed on foreign trade at remote dates. The acts, assizes, and ordinances promulgating those duties are now lost. Indeed anyone who tries to read the letter patent calling John's system into existence will realize by how narrow a margin that document escaped oblivion. The different national customs constituted definite mile-posts, the exact position of which is now unknown, and their very existence discovered only from their remains. Only the local customs were in origin customary. These supplied both the name and the example for the national customs. In the national system the great innovations were the levying of duties by the king in his political capacity, and the conception of a foreign, as distinct from a local, trade, a theory clearly laid down in 1203 and plainly put into execution. The only surprising feature about these early customs is just that they were national at so early a date. That they were so in the time of John and at the Conquest clearly shows that the idea was conceivable and conceived. But before the dominating particularism of the times, these customs were transformed into something different, tho where they survived at all they never quite lost their identity. The first great chapter of national customs history is a vital part of the development from the local to the national economy.

N. S. B. GRAS.

FRANKFORT-ON-THE-MAIN: A STUDY IN PRUSSIAN COMMUNAL FINANCE

SUMMARY

Reasons for the selection of Frankfort-on-the-Main for special study, 150. — Important changes introduced by the Kommunalabgabengesetz, 153. — Provisions of the K. A. G. on the apportionment of the local tax burden among the several kinds of taxes, 155. — Restrictions placed upon the communities in the levying of general income taxes, 157. — The taxes on incomes from land, buildings, and trade, 158. — Rules on the disposition of the proceeds of the several taxes, 161. — The Prussian Income Tax, 163. — The general tax rate, 169. — The special tax of Frankfort, 170. — The introduction of taxes on real estate, based on market value, 173. — The Frankfort special tax on unimproved properties (Landsteuer), 174. — The house tax (Haussteuer), 176. — The super-tax, a survival of a tax on rentals, 176. — The Frankfort Währschaftsgeld, a combination of transfer tax and increment value tax, 178. — The imperial increment tax (Reichszuwachssteuer), 185. — Its non-adaptability to purposes of imperial taxation, 187. — The Prussian trade tax (Gewerbsteuer), 187. — The Frankfort special ordinance, 189. — The Betriebsteuer, 191. — The department-store tax (Warenhaussteuer), 193. — Other taxes, 195. — Percentages of the total tax returns contributed by the chief taxes, 196. — No special tax on incomes from capital investments, 197. — Fees and special assessments, 199.

PART I

THIS study, undertaken with a desire to learn something of the finances and the financial administration of the Prussian municipalities, has resolved itself in large part into a special study of the financial system of the city of Frankfort-on-the-Main. There are several reasons, both general and particular, which seem to justify the selection. To cite first a general consideration: it appeared better to concen-

trate the attention upon one city, rather than to summarize cursorily the sources of income and the character of the expenditures of a large number of cities, showing bewildering, tho frequently unimportant, variations in detail. Furthermore, such a special study can be made to subserve a general purpose, for, despite the, in many respects, large powers of the Prussian communities, they are all subject to the provisions of the Kommunalabgabengesetz¹ which prescribes far-reaching regulations and restrictions in matters of financial legislation. As a result, there has been brought about a measure of uniformity which is at any rate sufficiently great to enable one in a specific instance to detect marked "variations from the norm."

There remain to be stated the particular reasons why Frankfort-on-the-Main was selected for purposes of investigation. In the first place, the city, under the guidance of an able and energetic mayor (*i. e.* the Oberbürgermeister), a student of finance, holding very decided opinions concerning matters of municipal taxation, has made some unique experiments in the taxation of real estate, and has itself engaged in real estate operations of impressive magnitude. Likewise in the development of municipal industries, in the extensive control acquired through ownership of public service corporations, the city affords material of especial interest. In fact it may be asserted in advance that although Frankfort probably possesses no institutions that are not common to a greater or less number of other Prussian cities, it presents from the point of view of variety and degree of development an advanced type of communal activity. For purposes of generalization this is all the better, as so

¹ Hereafter abbreviated K. A. G.

many more opportunities for comparison or contrast with the practices elsewhere prevalent are offered, and, at the same time, a very satisfactory composite picture for the study in hand is available.

The independent, self-sustaining character of the civic life is another advantage for present purposes. The municipality has not suffered the one-sided development of certain other rich residential cities, such, for example, as the Berlin suburbs; nor has its development been interfered with by the presence of central administrative activities, as in Berlin itself. Moreover, Frankfort has had to contend with all the problems that beset a rapidly growing city — one whose population has more than trebled in the course of thirty years (1880–1910), increasing over 43% during the decade from 1900 to 1910. In 1910, the city had 414,576 inhabitants, in 1880, only 136,831.¹ Under such circumstances there is more likelihood of finding a progressive financial policy striving to adapt itself to local changes and to local growth.

It may well be that the developed civic consciousness evidenced by the multifarious municipal activities of Frankfort is in part a product of its long and not remote past as a Free City. It has had centuries of independent political development. It had the beginnings of a separate communal administration before the close of the Hohenstauffen period. Its position as an Imperial City (*Reichsstadt*) was assured before the end of the fourteenth century, and in the fifteenth, it had attained to political and commercial importance of the first rank. The partial loss of its prestige as a great trading center was later recompensed by the world wide prominence which the Rothschilds acquired

¹ *Statistische Jahresübersichten der Stadt Frankfurt a. M.* Ausgabe, 1910–11, p. 11. Part of this increase is due to the incorporation of suburbs; 31,400 due to the incorporation of 11 suburbs, April 1, 1910.

during the Napoleonic Wars.¹ Primarily through their operations, the city became an important international banking and stock-exchange center — a position which it held during the first half of the nineteenth century. The incorporation of the city into the Prussian monarchy came in 1866, at the time of the war with Austria, and since then the ever-increasing centralization of economic as well as administrative activities in Berlin has, of course, detracted from Frankfurt's one-time unique position as an international banking center. Nevertheless the banking interests still play an important rôle, and on account of its expanding trade and commerce the city has also to be reckoned with. Such a history can fairly be expected to give to the inhabitants a somewhat greater initiative than is usually found, and to make them readier to assume new administrative responsibilities involving large expenditures.

A consideration of the main provisions of the K. A. G.² is an indispensable introduction to any study of Prussian communal finance, whether it be of a general or of a special nature. The law, which was passed July 14, 1893, and went into effect April 1, 1895, introduced changes of unquestioned moment into the tax systems of both state and communal government. The state, which had previously drawn a revenue from four distinct sources of direct taxation: general incomes (Einkommensteuer), incomes from land-holdings (Grundsteuer), incomes from buildings

¹ Geschichte der Handelskammer zu Frankfurt a. M. (1707-1908). Last section especially.

² Cf. Kommunalabgabengesetz, edited by Adickes and Woell, Berlin, 1911; also cf. Schriften des Vereins für Socialpolitik, No. 127.1, 1910, "Die Entwicklung des Gemeindeabgabewesens in den preussischen Städten unter der Herrschaft des Kommunalabgabengesetzes" by O. Landsberg. Also cf. Schriften des Vereins für Socialpolitik, No. 126 (1908) "Das heutige Gemeindebesteuerungssystem in Preussen unter besonderer Berücksichtigung des Westens der Monarchie" by E. Scholz.

(Gebäudesteuer), and from trades (Gewerbsteuer), relinquished its right to the three last named taxes in favor of the communities. As a means of supplementing the proceeds from the sole remaining direct tax, a new supplementary tax (Ergänzungssteuer) was introduced — a general property tax, whose rates are very low, however, the primary aim being to reach funded incomes, which had hitherto escaped special taxation.¹ It was hoped by freeing lands, buildings, and trades from taxation by the Prussian government that the local political units would be encouraged to draw more heavily upon these sources and to lighten the excessive, in some instances well-nigh unendurable, inroads which they were making upon the incomes of their citizens through the income tax. Richard Kaufmann in his book, *Die Kommunal финанzen*, gives certain statistics to illustrate the inequality of the burden of direct taxation in the cities, prior to the passage of the K. A. G.² In cities with over 10,000 inhabitants (1891-92) the local taxes amounted to 127,900,000 marks, of which sum 103,900,000 m. (81½%) was raised in the form of a general income tax, and only 16,700,000 m. (13.1%) from the other three sources of direct taxation.³ Of the 205 cities belonging to this group, 58 raised an income tax varying in amount from 200 to 300 per cent of the sum demanded by the state in the taxation of incomes, while 13 levied a tax exceeding 300 per cent

¹ With this end in view, the tax rate is naturally low, the tax beginning with property valued at more than 6,000 m. to 8,000 m. (inclusive) (tax 3 m.) and rising until it reaches 30 m. for 60,000 m. - 70,000 m. Property valued at over 200,000 to 220,000 m. (inclusive) pays a tax of 100 m., and for each further 20,000 m. or fraction thereof an additional tax of 10 m. is imposed. As will be seen, the tax rate is not progressive.

Cf. *Ergänzungssteuergesetz*, which went into effect April 1, 1895.

² Cf. Richard v. Kaufmann, *Die Kommunal финанzen*, vol. II, p. 297. Leipzig, 1906.

³ In the smaller cities the situation was not very different.

of the state imposition. For these last named 13 cities, for example, that meant payment of more than 16 per cent of the assessed income to state and local authorities in the case of incomes subject to the highest rate; and for all incomes of 9,500 m. or more, taxes exceeding 12% of the total income. Of the 58 cities previously mentioned, 18 raised no land tax, 17 no house tax, and 38 no trade tax.

In order to protect its own sources of revenue, and at the same time to insure a partial shifting of the burden of communal taxation, the state has made provision in the K. A. G. for the maintenance of a certain balance among the various forms of direct taxation. Such part of the financial need as has not been covered by indirect taxes,¹ fees (Gebühren) and special payments or assessments (Beiträge) must be distributed as follows.² The proceeds of the so-called "Realsteuern" (i. e. the taxes on the income from lands, buildings, and trades), estimated as percentages of the amount that would have been raised by the state under the state tax laws, must represent a percentage addition at least equal to, and at most one and one half times as great as, the percentage addition to the state income tax. That is, if a community imposes a 100% super-tax (Zuschlag) upon the state income tax, the other direct taxes must amount to at least 100% and at most to 150% of the sums that would have been collected by the state had it continued to raise the land, building, and trade taxes.³ So long as these last-named taxes do not exceed 100% of the state tax, the income tax need not be drawn on

¹ K. A. G., § 1, § 2.

² Cf. K. A. G., § 54 to § 60. Verteilung des Steuerbedarfs auf die verschiedenen Steuerarten.

³ Cf. later discussion concerning these taxes.

by the communities, or it may be assessed for less than 100% of the state tax. If the "real" taxes are burdened with a super-tax exceeding 150%, and the local income tax has reached 150% of the state tax, it is thereafter permissible to raise the additional amounts in such wise that for each 1% addition to the "real" taxes, an addition of 2% may be made to the income tax. For example, if the "real" taxes equal 175%, the income tax cannot be less than $116\frac{2}{3}\%$, and it may go as high as 200% of the state tax. As a rule the "real" taxes are not to exceed 200% of the revenues collectible under the previously existing state taxes.¹ Deviations from these rules distributing the tax burden must receive the approval of designated state officials, and are only to be permitted for special reasons. Furthermore, the "real" taxes are to be drawn on for equal percentual additions to the several state taxes. Here arises a difficulty: the communities are permitted a considerable latitude in the introduction of special taxes on land, buildings, and trade,² and where such exist, the probable returns can only be estimated and then expressed as percentages of the amounts that would have been raised under the state taxes. Such calculations will, of course, be subject to error, and furthermore, the returns from year to year may vary considerably. Happily, exceptions to the last-mentioned rule of apportionment are likewise permissible, for special reasons, by authority of the Minister of the Interior and the Finance Minister. As a matter of record the state has been ready enough to recognize the existence of special reasons for modifying all these complicated rules of apportionment;³

¹ The exceptions to this rule are, however, numerous.

² Cf. K. A. G., § 25 and § 29.

³ [Dr. Freund, Ministerium des Innern.] The aim is to prevent too heavy taxation of incomes. Otherwise, no very set rules are followed.

but the fact remains that it is invested with such wide powers of supervision that it would appear possible, were the state authorities so minded, to refuse to approve any or all the special laws which the communities are conceded the right to pass.

In the case of the income tax, the communal bodies are generally confined to the levying of percentage additions to the state tax, and that without alteration of the income classification;¹ that is, if a city raises for its own use an addition of 200% to the state tax, it must take from each tax payer 200% of the sum for which he is assessed by the state, irrespective of the size of his income, be it 900 or 100,000 marks. As critics have pointed out, the result is a disproportionately heavy addition to the burden borne by the smaller incomes, for, altho as a matter of percentages, the relations remain unaltered, the additional absolute sum to be paid is much more hardly defrayed out of the slender free income of the smaller tax payer than is the absolutely much larger sum demanded of the well-to-do tax payer. Nevertheless, the K. A. G. expressly forbids the cities to make changes in the tariff in favor of the smaller incomes, while admitting the possibility, with the approval of the state, of altering the tariff to the disadvantage of the lower income classes.² The reason for this prohibition lay, no doubt, in the fear that the cities might be induced to levy too heavily upon the higher incomes, thereby increasing the incentive to evasion of tax payments.

¹ K. A. G., § 36.

² This clause probably has no practical importance. The state would hardly give its consent to any change that would alter the existing tax rates at the expense of the less well-to-do. In no case can the rate of taxation be higher for the lower than for the upper income classes. Cf. K. A. G., § 37. It is provided that special income taxes, existing at the time of the passage of this law, may for particular reasons be approved, even tho not in conformity with the provisions of the law. The special income tax of Frankfort will be discussed later.

and consequently diminishing the returns received by the state from this source.

Since the Prussian communities, with the exception of a few favored cities, among them Berlin and certain of its suburbs, such as Charlottenburg and Deutsch-Wilmersdorf, still raise local income taxes in excess, frequently very much in excess of 100% of the state tax, the state has extensive powers of supervision, as, according to the provisions of the K. A. G., all such super-taxes require the approval of specified state officials.

Altho the Prussian state has ceased since 1883 to tax incomes under 900 marks, the communities are still permitted to draw on the lesser incomes with the reservation, however, that the tax shall not exceed, and may be less than certain sums expressly specified in the law.¹ Surprising tho it may seem, the cities take advantage of these permissive clauses, frequently taxing incomes of not more than 420 marks per year (roughly \$105). The incomes ranging from 420 to 660 marks were tax free (in 1910) in only 24 cities. There were just 16 cities which taxed no incomes under 900 marks.²

The other direct taxes which today are much more important sources of income to the Prussian cities than formerly (*i. e.* the Grund-, Gebäude- and Gewerbesteuern) were, as has been said, relinquished by the state in favor of the communal bodies.³ The existing machinery for the assessment of these taxes was, however, retained. This reform of 1893, therefore, effected a separation of state and communal revenues in all

¹ K. A. G., § 38. Tax up to and including 420 m.: $\frac{1}{2}$ % but not to exceed 1.20 m. 420-660 m. (inclusive): 2.40 m. Over 660 m.: 4 m.

² Cf. *Kommunales Jahrbuch*, 1911-12, p. 630.

³ Cf. *Gesetz wegen Aufhebung direkter Staatsteuern* vom 14. Juli 1893 (Preussen).

cases save that of the income tax,¹ and excluded thereby from collection for state purposes, taxes, which, in their nature, however carefully administered, could not be made consonant with the principles of justice when applied to so extensive an area as the Prussian state. The taxes on lands, buildings, and trade were very nearly pure types of objective taxation, levied on incomes from particular objective sources of revenue, without regard to the individual circumstances of the tax payer — so much so, that debts, mortgages, etc., give no ground for exemptions or deductions. The land tax,² for example, was originally so levied as to bring in a fixed absolute sum, the amounts to be contributed by the various land owners being contingent upon the productivity of the several parcels, regard being had to the manner of cultivation and the quality of the soil. The measure of productivity was as impersonal as possible — the average that could be obtained from similar property assuming an ordinary degree of ability and usual methods of cultivation. Even the smallest and most mortgage burdened properties cannot escape under such a system.

The tax on buildings (Gebäudesteuer)³ was also levied according to objective use value. In those cities and localities where the majority of houses were rented, the income (use value) of the buildings including the courts or gardens appurtenant was to be measured by the average yearly rental obtained during the preceding 10 years. In the country districts, other measures had, of course, to be employed, as

¹ The *Ergänzungssteuer* is reserved absolutely to the state.

² Cf. Gesetz, betreffend die anderweite Regelung der Grundsteuer, 21. Mai 1861. Berlin, 1861, Amtliche Ausgabe.

³ Gesetz, betreffend die Einführung einer allgemeinen Gebäudesteuer. 21. Mai 1861. Berlin, 1861, Amtliche Ausgabe.

size, construction, relation to land-holdings, etc. For dwellings, the tax was 4% of the so-estimated use-value, for buildings employed for business or industrial purposes, 2%. The law did make provision for certain reductions where the returns were very slight and for exemptions in case a building remained unrented an entire year.

The trade tax (*Gewerbsteuer*)¹ which was reformed in 1891 made much more allowance for individual differences, losing the character of a rigidly objective tax, altho the law still made no deductions for interest on debts incurred for business purposes.

It is clear that under such a system inequalities and hardships must have been great and frequent, increasing in proportion as modern credit relations began to play an important rôle in agriculture and industry. The transfer of these taxes to the communities has a certain justification, theoretical and practical, even where the rigidity of the older state laws remains unaltered. The difficulties of correct assessment are much less on the one hand, and on the other the failure to make allowance for subjective differences can be more convincingly defended by appeal to the benefit theory of taxation than under the older system of state-wide taxation. As a matter of fact, the K. A. G. permits the introduction of special taxes on lands, buildings, and trade or business undertakings, measured by practically any standards which the communities choose to adopt. It becomes possible, therefore, to consider the disabilities of individual tax payers, to grant exemptions, to make frequent revisions of assessments, etc. But no special tax can make very full allowance for such subjective individual differences, nor would it be considered desirable that

¹ *Gewerbsteuergesetz vom 24. Juni 1891 (Preussen).*

it should. Indeed, the particular taxes under discussion represent a deliberate, tho partial, application of the principle of taxation according to benefits, in contradistinction to the general income tax, based primarily upon ability to pay. As the cities may assess owners of adjacent property to help defray the costs of laying a new street, why, it is asked, may not these special taxes be regarded as payments (in the nature of assessments) for special benefits which the real estate owner or the shop-keeper, for example, derives from the existence of certain communal activities, which increase the rents of his land or the returns from his business, as the case may be?

In the rules laid down for the application of the proceeds of the various taxes, one is again aware of the emphasis placed upon the regulation of taxation with reference to benefits received. The proceeds of the income tax, for example, are to be used as far as possible to defray such expenses as inure to the benefit of the whole body of the citizens; for example, the costs of the schools, poor and sick relief, public safety, general administration.¹ The returns of the other taxes are to be devoted to purposes which are especially advantageous to house and land owners, business and industrial interests. For outlays made for the sake of all, but inuring especially to the advantage of owners of real property, as, for example, expenditures for canalisation and for the fire department, both the income tax and the "real" taxes are to be drawn upon. Of course these rules are by no means hard and fast, nor could they be, especially as outlays, which in certain cities may fairly be said to be undertaken for the benefit of the whole people, are elsewhere

¹ The state tries to provide that $\frac{1}{3}$ of such expenditures, at any rate, shall be met by the proceeds of the income tax. [Dr. Freund; also, *Anweisung zur Ausführung des K. A. G. vom 10. Mai 1894.*

of distinct advantage to especial interests. These provisions serve, however, as a guide to the central authorities in determining whether or not a city is justified in increasing the income from this instead of that taxable source; and the approval of a tax ordinance may be refused on the ground that these principles have been ignored in distributing the burden of taxation.

The communities are also empowered to levy certain indirect taxes,¹ altho the Imperial law of 1902,² which went into force in 1910, has severely limited the field of indirect taxation, so far as excise taxes are concerned. But it must be kept in mind that in Prussia the distinction between direct and indirect taxes is, for administrative purposes, a formal one, depending upon the way the tax is levied — whether it be a regularly recurrent imposition, levied by means of assessment rolls of names, or a payment dependent upon particular acts or circumstances, and levied by means of tariffs or schedules of charges.³ The administrative classification by no means corresponds with the best scientific usage, which bases the distinction between direct and indirect taxes upon the determination of their incidence. In Prussia, for example, the increment tax is classified as indirect,⁴ notwithstanding the firm belief of its advocates that the tax cannot be shifted by the original land owner to a subsequent purchaser. Indeed, its non-shiftability is regarded as one of its prime virtues, barring which, it fails of its main purpose.

The K. A. G. also endeavored to increase the returns from fees and special assessments, not only by per-

¹ K. A. G., § 13.

² *Zolltarifgesetz*, 25. Dec. 1902.

³ Cf. C. J. Bullock, "Direct and Indirect Taxes," *Pol. Sci. Quarterly*, vol. 13, pp. 463-464, for discussion of this administrative classification, prevalent in Europe.

⁴ Cf. R. Brunhuber, *Die Wertzuwachsteuer*, p. 54, Jena, 1906.

missive clauses, but by enjoining the collection of special payments in particular instances. But these sections of the law can best be elaborated in connection with a discussion of the development in Frankfort, where the fee system has attained an especially interesting degree of refinement.

As has been explained, the Prussian law regulating the taxation of incomes for the benefit of the state likewise furnishes the basis for all communal income tax ordinances. It is therefore necessary to examine its provisions in some detail in order to understand the tax system of any particular community.¹ The machinery for assessments and collections has been called into being by the state, and for purposes of communal taxation, a mathematical calculation practically suffices.² The method of assessing, based on official estimates and personal declarations, is in marked contrast to the English practice of collection at the source when possible.³ The respective merits of the two systems have long been the subject of controversy. Does or does not the German system accomplish its purpose as effectively? Are evasions greater or less? One can only draw inferences, as who can estimate the extent of evasions, where the possibility of concealment exists? There are constant complaints that the larger incomes escape, and efforts are at present being made to increase the penalties for false declarations, substituting imprisonment for money fines, and further requiring employers to give the names and addresses of those of their employees having

¹ Cf. Einkommensteuergesetz und Ergänzungsteuergesetz, in der Fassung vom 19. Juni 1906 (with changes introduced June 18, 1907 and May 26, 1909).

² Of course there is not absolute identity of the tax paying individuals. The state may sometimes leave free, where the local units tax, and vice versa.

³ For an account of changes in the English law, which necessitate a partial abandonment of the principle of stoppage at the source: Cf. E. R. A. Seligman, "Recent Tax Reforms Abroad, I," *Pol. Science Quarterly*, September, 1912, pp. 457-458.

incomes exceeding 3,000 marks.¹ (Returns are already required for those having lesser incomes.) It has also been suggested that compulsory book-keeping be introduced for all persons having incomes exceeding a certain specified sum, say 3,000 marks. An examination of the declarations now required of the tax payer almost convinces one that accurate returns are impossible without resort to some such proceeding, and yet to expect that every man whose income reaches a certain sum will be able to book his returns and expenditures properly is to assume a high degree of general intelligence on the part of the citizens.

The administrative machinery for the assessment of the tax is complicated.² In the first place there is a commission of preliminary estimate (*Voreinschätzungskommission*) which is composed of certain members appointed by the central government, and others elected by the local assemblies. The members hold their positions 6 years, every 3 years one-half the number relinquishing office. The elective members (constituting the so-called "greater half") are as far as possible to represent various classes of income. This body examines tax lists, secures information through its chairman concerning tax payers, and definitively fixes the sums to be demanded of those receiving incomes between 900 and 3,000 marks. For this group of tax payers, a personal declaration is not required.³ The completion of the assessments is made through the *Veranlagungskommission* (assessment commission), similarly composed of elective and appointive members. The chairman has to secure

¹ Cf. *Einkommensteuernovelle*, 18. Jan. 1912.

² Cf. *ibid.*, § 32 to § 43.

³ The tax payers with these smaller incomes numbered 16,710,000 out of a total of 19,000,000 persons subject to the income tax in 1910.

as full information as possible concerning the property and income of the tax payer. Those persons whose income is thought to exceed 3,000 marks can be ordered to return a declaration. Whenever an income statement appears doubtful, state and communal officials have the right to inspect books, documents, deeds, records, etc.,¹ and to make excerpts. The tax payer is first given an opportunity, however, to explain obscurities and present proofs. If the commission, after questions and examinations, is still doubtful, it can take the responsibility of estimating the amount of the income itself.² Probably this method works better in Prussia than it would in other states in which official inquiry into private affairs is not recognized as so much a matter of course, and the public conscience has not been subjected to such hard training. American experience with the general property tax, with the resultant practical immunity from taxation of personalty, makes one suspicious of a system depending largely for success upon the co-operation of the tax payer. In Prussia there exists apparently a disposition to believe that the system is, on the whole, adapted to the particular national conditions, however little suited it may be to those of other countries.

The Berufungskommission (commission of final appeal for tax payers with incomes under 3,000 marks), and the Oberverwaltungsgericht, the highest administrative court, hear appeals in case of dispute. The latter court investigates merely the law, and does not revise the facts of the case.³

¹ An examination of the records of the city savings banks is not permitted, however. A licensed evasion, to all appearances.

² The assessments for the *Ergänzungsteuer* are made by this same commission without previous assessment by the *Voreinschätzungskommission*. There are, however, committees of estimate subject to the *Veranlagungskommission*. Cf. *Ergänzungsteuergesetz*, §§ 22 to 33.

³ *Einkommensteuergesetz*, § 43 ff.

The declaration, which the tax payers are themselves required to fill out, provides for a separation of the returns from (a) capital investments, (b) lands, rentals, etc., including the rental value of a house occupied by its owner, (c) trade and industry, (d) other gainful occupations.¹ Certain deductions are permitted:² for example, returns from inheritances, gifts, etc., of an extraordinary nature, sales of land (if the latter are not undertaken as a business or for purposes of speculation) are regarded as additions to the capital or property of the tax payer. The interest on mortgages and other debts is subtracted from the taxable income, and allowance is also made for necessary costs of maintenance of the income source, among other things, the sums "regularly" set aside for depreciation of buildings, machinery, etc., are to be deducted. As to just what percentage of income is to be carried to depreciation account is left to the tax payer to decide, and however conscientious he may be, the decision must be difficult. There are also certain individual personal exemptions — the amount paid out in taxes on land, buildings, business enterprises may be deducted to a sum equal to 100% of the state Grund-, Gebäude- and Gewerbesteuer (the "real" taxes); also payments for sickness, old age, accident, and life insurance to an amount not exceeding 1,200 marks.³ Finally the so-called "Kinderprivileg" has led to reductions which deprive state and local governments of a very considerable revenue.⁴

There are certain checks upon these returns provided by the records for the Gewerbesteuer (trade

¹ Einkommensteuergesetz, § 6.

² Ibid., § 8.

³ The maximum allowance is 600 m., for life insurance and 600 m. for all other forms of insurance.

⁴ Cf. Einkommensteuergesetz, § 19.

tax) and the Grundsteuer (land tax). The state continues, furthermore, in possession of its great land register (Grundkataster) which aids materially in verifying declarations of income obtained from land-holdings. For the income from capital investments, of course, individual statements must be relied upon largely, as well as in the case of salaried and professional persons whose incomes are a very variable quantity. It is hard to conceive of a system under which such incomes would not in part escape their share of the tax burden, altho the funded incomes can be forced in part to contribute indirectly through taxation of corporations.

Persons whose incomes are taxable in several different communities are protected against double taxation in the following way. That part of the income derived from real property — lands, buildings, business establishments — is to be taxed for the benefit of those communities from which the income is drawn; the rest is taxable in the city or place of residence. The rate of assessment is, however, based on the total income and not on the amount locally received. If the proportion of income taxable in the place of residence is less than one-fourth of the total, a full fourth can be taxed and afterwards corresponding deductions must be made from the returns to other communities.¹

Stock companies (Aktiengesellschaften) are, curiously enough, dealt with as private persons.² Like private persons, they may make deductions for the interest paid on their debts, as bond issues for example. Theoretically, the practice is certainly unsound, altho it may work no great actual injustice in Prussia. Certainly in the United States where the working capital of so many corporations has been provided

¹ K. A. G., § 49 ff.

² Einkommensteuergesetz, § 15.

either wholly or in part through bond issues, there seems no reasonable ground for such a distinction. However, questions as to whether the corporations might not be tempted to increase their bond issues as a means of reducing their tax payments, simply elicited the reply that they show no such tendencies, interest rates being, in general, too high.¹ Furthermore, as the laws governing incorporation contain severe provisions against stock watering, the need of supplementing the capital stock by the proceeds of bond issues is not present.

The corporate net returns, beginning with an income of 900 marks, are taxed at the same rate fixed for the income of private persons, with the reservation that for purposes of state taxation, a sum amounting to an interest return of $3\frac{1}{2}\%$ on the paid-in share capital is permitted to go free.² The owners of shares in such companies are forbidden to make deductions in their own tax declarations for the interest from such investments, and are to that extent subject to double taxation.³

As the income tax is a subjective tax, designed to reach persons in proportion to their ability to pay, it seems ill-adapted to purposes of corporate taxation, there being no necessary connection between the opulence of the corporation, and the financial circumstances of its individual members. In fact, such a tax even in the case of most prosperous corporations

¹ [Dr. Freund, Ministerialdirektor, Ministerium des Innern, and Professor Sering, Univ. Berlin.]

² For purposes of communal taxation this exemption is not permitted.

³ Companies with limited liability, but non-stock issuing (Gesellschaften mit beschränkter Haftung) are taxed at a somewhat higher rate by the state. But as compensation, the tax payer can deduct the income from such investments from his tax declaration made to the state. For purposes of communal taxation, the owners, not the company, are taxed on their respective shares of the net returns, the returns being treated as income from trade or business sources. There seems to be no particular reason for treating these corporations in a different fashion from the stock companies.

may work positive injury by unduly burdening the smaller share-holders. If it be replied (as it is) that the tax is intended as a privilege tax, it can only be held to be an imperfect measure of the value of the privilege. A much better test for such a purpose is provided by the new Wisconsin income tax, which grades the tax progression, not according to the actual amount of the income but according to the amount of the income in relation to the size of the capital investment;¹ that is, a corporate income of \$100,000, if it represent but a 4% investment is taxed at a lesser rate than a \$10,000 income representing a 6% return. As a privilege tax, the latter proceeding is unquestionably more logical.

The general tax rate for private persons and for corporations, which begins with .6% in the case of incomes of 900 marks advances through ten classifications to 2% for incomes of 3,000 marks, reaching 2.2% (4,200 m.), 3% (9,500-30,500 m.), and attaining its highest rate 4% for incomes of 100,000 marks or more. Since the "temporary" increase of 1909 incomes of 3,000 m. pay 2.2%; 4,200 m., 2.4%; 9,500 m., 3.3%; 30,500 m. 3.6%; and 100,000 m. or more, 5%.² As will be at once apparent, the progression is very unequal, and for the great intermediate income classes (9,500-30,500 m.) there practically exists no progression — indeed there is none under the fixed tariff, apart from the "temporary" (?) increases introduced in 1909. Furthermore, no distinction is made between funded and unfunded incomes, altho as has been suggested, the *Ergänzungssteuer* may be regarded as providing for the special taxation of the former. Altho the tariff

¹ Cf. T. S. Adams, "The Wisconsin Income Tax," *American Economic Review*, Dec. 1911.

² These temporary increases were only granted for 3 years. They will, no doubt have to be permanently incorporated into the law and the whole reworked.

is not high, it must be remembered that for purposes of estimating the burden borne by the tax payer, the percentages must always be doubled, frequently tripled, and sometimes quadrupled, since the communal income taxes have to be considered. Altho the communities are not permitted under the provisions of the K. A. G. to introduce anew special income taxes, nor to alter the rates of taxation to the disadvantage of the larger incomes, special laws previously in force might be presented for approval. Such a special law exists in Frankfort-on-the-Main and provides for marked reductions in the case of incomes of 10,500 marks or less. Incomes up to and inclusive of 900 marks are tax-free. Those from 901-3,000 marks are, on the basis of a 100% addition to the state tax, taxed at 70% of the normal rates; 3,001-6,000 marks at 80%; 6,001-10,500 marks at 90%; and for all higher incomes the regular tariff holds.¹ In other words, the progression is much more accentuated in Frankfort than in other Prussian cities,² which are expressly forbidden the introduction of a tariff which would make the progression greater than it is under the state law.

Frankfort long figured among those fortunate communities which raised an addition of just 100% to the state tax, and that only for incomes exceeding 10,500 marks. But the great and growing financial need has of late years necessitated a rapid rise in rates, an addition of 5% to the special tariff being followed by an increase in 1910 which brought the tax up to 142.8% of the original rates. Estimated in percentages of the state tax, the incomes from 901

¹ Steuerordnung für die Gemeindegemeinschaften: Bürgerbuch der Stadtgemeinde Frankfurt a. M., Amtliche Ausgabe, June, 1906.

² Altona also has a special tax which admits of an increase in rates for the higher income classes.

to 3,000 marks (inclusive) are taxed by the city at 99.96% of the rate fixed by the state. Incomes from 3,001–6,000 marks pay at the rate of 114.24%; 6,001–10,500, 128.52%; and the higher incomes, 142.8%. These percentages are based on the state rates in force prior to 1909, as the temporary increases cannot be taken into account for purposes of estimating local taxes.¹ Despite the recent changes, the citizens are as yet relatively favored. Of 37 among the larger Prussian cities, for example, which increased the income tax rate in 1910–11, 21 raised a tax either equal to or greater than 200%, in two instances amounting to 275% of the state tax. Only 4 among them had a lesser tax than Frankfort, and in the case of Cassel (one of the 4) the percentages were lower only for the incomes above 10,500 marks.²

The persons taxed on incomes ranging from 901 to 3,000 marks contributed 1,819,300 marks—the tax payers in this group numbering 98,359 (1910–11)—while the 4,394 tax payers with incomes exceeding 10,500 m. contributed 8,756,800 m. out of a total of 12,676,300 m.³ Frankfort holds an exceedingly conspicuous place among the Prussian cities because of the relatively great number of citizens enjoying large incomes. Indeed approximately 300 individuals with incomes exceeding 100,000 m. pay about one-third the entire income tax.⁴ The amounts paid by corporate undertakings form a not inconsiderable

¹ Cf. § 9. Das Gesetz, betreffend die Bereitstellung von Mitteln zu Dienstlohn- und Gehaltsverbesserungen, vom 26. Mai 1909.

² Cf. Kommunales Jahrbuch, 1911–12, p. 630. In the case of Coblenz, the percentages were lower only for the incomes above 6,000 m. Cf. also Statistische Jahresübersichten der Stadt, 1910–11, p. 110.

³ Statistische Jahresübersichten der Stadt, p. 109. The statistics give not the actual but the computed returns. They relate only to physical persons.

⁴ More exactly, 1910–11, 296 persons paid 3,222,800 m. out of a total collected by the state from the citizens of 10,242,500 m. (i. e. only from physical persons). Verwaltungsbericht des Magistrats für 1910, Rechner-Amt, p. 45 of the separate publication.

part of the whole: 83 local companies, 145 foreign companies, 1 holding company, 13 registered associations, 15 others, and the Prussian railway contributed altogether in 1910-11 a total of 2,502,200 m., the Prussian railway alone paying 269,400 m.¹ The taxation of property belonging to the central government, as in this last mentioned instance, is of course to be justified on the ground that when the state has made productive investments, those communities which have additional burdens or responsibilities imposed upon them in consequence are entitled to some compensation.²

Altho the income tax is now and undoubtedly will remain the most important single source of revenue for state and communal purposes, the communities have supplementary sources of revenue which, taken together, cover a variable but nevertheless large proportion of the total financial need. Frankfurt, despite the reputation it has attained for dealing somewhat harshly with its land and real estate owners, and despite the complaints of the Chamber of Commerce (*Handelskammer*) anent the heaviness of such impositions, obtains a relatively small amount of its income from this source. In 1910, for example, only 26.5% of the total tax-sum was met by taxation of land and buildings, including the transfer tax and the increment tax. In 1908, the proportion was somewhat greater: 33%. In a list of 50 of the larger Prussian cities, graded according to the percentage of income obtained from this source of taxation, Frankfurt stands twenty-fifth.³ Altona obtains 61% of its returns from these taxes; Rixdorf, 57.6%; Schöneberg and Charlotten-

¹ *Ibid.*, pp. 47, 48 of the separate publication (*Sonderabdruck*).

² K. A. G., § 45 and § 47.

³ *Kommunales Jahrbuch*, 1911-12, p. 643.

burg, 46.7% and 41.2% respectively; 14 other cities, over 30%.

With a view to restraining undue speculation in city lands and with intent, furthermore, to reach in the form of a tax, some of the valuable properties that under the old system escaped wholly or in part, many German cities have ceased to tax real estate according to the amount of the yearly returns, and have taken advantage of the provisions of the K. A. G. permitting the introduction of taxes based on market value.¹ It is a truism to say that for city properties the capitalized value of such annual returns (if, indeed, any exist) may deviate to any extent from the selling value of the land, and immensely valuable tracts may be permitted to remain for years undeveloped with a view to obtaining the ever-growing value increase. If there exists freedom from tax impositions, naturally the holding of the land is greatly facilitated. The older Prussian ground and building taxes, based on yearly returns from the property, were undoubtedly the most correct measure for country and small town holdings and for those urban sections where building lots were abundant and real estate operations not of a purely speculative nature. But with the rapid growth and the sudden rise in real estate values in so many Prussian cities, the system seemed unsuited to the new conditions, and the cities in rapid succession have introduced taxes based on current or market values.² Fifty-five Prussian cities have such taxes —

¹ § 25, K. A. G. The communities are permitted the introduction of special taxes on landed property. The assessment can follow according to the net returns or use value of one or more years, the rental value or the market value of lands and buildings, according to local methods of differentiation, or a combination of all these.

² Cf. Preussisches Verwaltungsblatt, 32, No. 25; June 10, 1910. What the courts understand by current (market) value (*gemeiner Wert*) is the selling price, the safest measure for determination being the sums paid recently, either for these or similar properties. In general the market value is not to be obtained through capitalization of the actually achieved income on the basis of the usual rate of interest. The question is what would be paid for the property under normal conditions.

a few, with a view to putting especially heavy pressure upon the owners of unbuilt property, taxing the land belonging to the latter at a much higher rate than the improved property. In Charlottenburg, for example, the rates are 5.4 per 1,000 and 2.7 per 1,000 respectively. In other cities (not included among the above mentioned 55, which tax real estate according to market value only), the tax according to market value is introduced only for the unbuilt properties, and another measure retained for the improved, which are taxed according to gross (rental) income or use value, after the fashion of the Prussian building tax (*Gebäudesteuer*). Frankfort belongs to this latter small group which also includes Hanover, Cassel, Posen, Linden, Wandsbek.¹

The special tax on unimproved properties which Frankfort levies according to the market value thereof,² originally provided for a tax rate of 2 per 1000, with a rise to 3 (April 1, 1910), 4 (April, 1915), until 5 should have been reached in April, 1920. The last named rate applies at once in the case of property owners who have acquired possession since the passage of the law (cases of inheritance excepted). But property used by its owners for gardening, agricultural purposes, etc., is taxed only at the rate of 2 per 1,000, provided the value of the land does not exceed certain sums which are high enough to indicate that it is "ripe" for building purposes. Furthermore, parks and gardens belonging to dwelling houses are assessed solely under the house tax, irrespective of size — no doubt with a view to preventing the sale of the magnificent private gardens of which the city is justly proud.

¹ *Kommunales Jahrbuch*, 1911-12, p. 631.

² II. Nachtrag zum Bürgerbuch der Stadtgemeinde F. a. M. Amtliche Ausgabe, Okt. 1908, p. 195, Haus- und Landsteuer.

For purposes of assessment for the land tax (*Landsteuer*) the city was, under the provisions of the law as first passed, divided into districts (*Lageklassen*) which as far as possible were to contain properties of approximately the same value. This districting was to be subjected to a revision every three years, and each year an "average" value was to be set for each district, based primarily on the selling prices obtained within that particular area during the preceding three years. Prices which were the result of especial and unusual circumstances were therefore not considered, the tax being assessed on the basis of the average as determined for each district. The method was that employed by the state under the "*Grundsteuer*" — the so-called "cataster" method. The difficulties and inequalities were, however, so great as to lead to changes in the law, which went into effect in 1910, providing for the abolition of the existing classifications, and thereafter assessments on the basis of market value for each separate piece of property.¹

The assessment committee (consisting principally of citizens) has a difficult task at best,² as is conceded by the city officials. Even a desire to be honest and impartial can only lighten the enormous difficulties of estimating market values — fluctuating, and arbitrary in their fluctuations, as they are. Not only local but state officials concede the inevitable injustice and inequalities, while asserting that such taxes are nevertheless to be preferred to the older system which facilitated the escape of so many property owners, whose immunity was an injury to the public and an undeserved privilege to themselves. Naturally the

¹ *Das Anseige-Blatt der städtischen Behörden, Frankfurt a. M.* (Jan. 9, 1910), p. 25.

² Every property owner is bound on demand to give all necessary information concerning use of land, rentals, contracts with tenants, cost of acquisition, etc.

difficulties are greatest where the land-holdings on the outskirts of the cities are still used for gardening or other agricultural purposes. To tax such properties at the full rate would mean ruin, forced sales on the part of many depending for a living upon their properties, and by no means desirous of giving up a fixed income for a speculative one-time gain. Frankfort, which has recently incorporated a great many suburbs containing land so utilized, does provide that such properties be taxed at a lesser rate. In the case of some other cities, the supervising state officials have been obliged, as a result of numerous and bitter complaints from gardeners, small agriculturists, etc., on the outskirts, to enjoin a distinction between the tax rate for land not yet ready for building, even tho its value has risen as a result of its situation, and other building lots, and to require that the former be taxed at only $\frac{1}{2}$ or $\frac{2}{3}$ the usual rate.¹ To put a land owner who may be without speculative intent in a position where he must either sell or pay a large tax on his property without regard to the amount of the income therefrom is not always in the interests of an enlightened land policy.

The house tax, which is separately assessed, retains the characteristics of the old Prussian Gebäudesteuer, the tax being 4% of the gross return (Rohertrag) — *i. e.* rental return including the value of any unusual services rendered by the tenant for the benefit of the landlord.² In case the occupier is also the owner, the amount of the rental as judged by local conditions is to be estimated. To this tax comes an additional or super-tax in the case of dwelling houses whose yearly rental value exceeds 500 marks. This tax,

¹ [Ministerialdirektor Dr. Freund.]

² *I. e.*, the tax equals 4 m., for each 100 m. or fraction thereof exceeding 50 m.

4 m. for rentals of 501-600 m., reaches 110 m. for rentals of 2,700 m. and for all higher rentals, 4%. The super-tax is a survival of the earlier tax on rentals which was raised in Frankfort and three other Prussian cities at the time of the passage of the K. A. G.¹ The latter law expressly forbids the introduction of such taxes,² and provides that the existing ones to be retained must be approved by the Minister of the Interior and the Finance Minister.³ The other cities later relinquished the tax and Frankfort eventually made of it a super-tax on dwellings (levied as part of the house tax) and on buildings used for business, industrial purposes (levied in connection with the trade (Gewerbe) tax).

Altho the owner of the property in question is alone responsible for the payment of the house tax the problem of the incidence of the tax is more a matter of fact than of law or theory. Some students of the housing problem in Frankfort contend that the heavy taxes levied according to rental values are actually borne by the tenants in the payment of higher rents — especially in the case of the smaller dwellings, of which there is a dearth in the city. The higher the taxes, the harder the bargains which the landlords as a result of their positions as owners of "scarce" goods are able to drive.⁴

Two other taxes on real estate have lately been extensively introduced into the Prussian communities,

¹ Cf. Bürgerbuch, Wohn- und Mietsteuerordnung.

² K. A. G., § 23.

³ Taxes on rentals pressed heavily upon the tenants least able to bear them, by no means fulfilling the expectations of those who thought them admirably adapted to reach incomes in proportion to ability to pay. As, however, rental payments admittedly constitute a very much larger relative expenditure in the case of smaller incomes, the tax was really degressive in its working.

⁴ Whatever the reason, rents are said to be unusually high in the city, and out of all relation to the income of the occupants of the smaller dwellings.

Cf. E. Cahn, Die Wohnungsnot in Frankfurt a. M., ihre Ursachen und ihre Abhilfe.

and in Frankfort they are found combined in unusual fashion in a single tax ordinance, the so-called Währschaftsgeld, including the transfer tax (Umsatzsteuer) and the increment tax (Wertzuwachssteuer). Despite the fact that there is no scientific justification for regarding these taxes as indirect,¹ it is fortunate, judged from a practical standpoint, that administrative practice sanctions such a classification. One of the reasons for the introduction of these taxes was the pressing need for new sources of revenue, and if classified as direct taxes limited by the rules concerning the more or less fixed relations to be maintained among the various forms of direct taxes, they might displace in part the existing communal taxes on real estate holdings, and thereby defeat their purpose to a certain extent. Furthermore the uncertain and fluctuating returns make it difficult, if not impossible, to say what percentage of the total income the taxes in question can be counted on to produce within any given year. The proceeds are best devoted, therefore, to purposes other than the defrayal of the regularly recurring communal expenses, to meet which the direct taxes are imposed.

In Frankfort, the tax on land transfers (Umsatzsteuer) has a centuries long and unbroken history.² Since 1867 it has been levied as a communal tax on every land transfer not the result of inheritance, the tax being based on the value of the land at the time of the transfer. In 1904 the rate was raised to 2% and the tax thereafter combined with the increment tax (Wertzuwachssteuer).³ If twenty years have

¹ The so-called "direct" increment tax is collected at regular intervals, instead of being collected only at the times that the property changes hands.

² For brief account of its history cf. F. Adickes, Studien über die weitere Entwicklung des Gemeindesteuersystems auf Grund des Preussischen Kommunalabgabengesetzes vom 14. Juli 1893. Tübingen, 1894.

³ Steuerordnung, das Währschaftsgeld betreffend, 19. Feb. 1904 und 11. Sept. 1906 (An Stelle der Steuerordnungen v. 19. Feb. 1904 und 17. Apr. 1906).

passed since the time of the last transfer, a super-tax is raised (also introduced in 1904) which is greater in the case of unimproved than of improved properties. At present the super-tax is as follows: improved property which has been held for at least twenty years or as much as thirty years pays a super-tax of 1% of the price at the time of sale. Over 30 to 40 years, 1½%; over 40 years, 2%. The rates for unimproved properties are: 20-30 years, 2%; over 30-40 years 3%, etc., the highest rate being 6% for all property that has been held more than 60 years.¹

As it stands the law seems designed to discourage a lengthy period of possession in marked contrast with the procedure in other cities, where speculative short-time holdings are taxed with a view to the preferment of long resident property owners. Conditions peculiar to Frankfort are said to account for the inverted emphasis. The city suffers, not from too much, but from too little speculation in real estate, due to the fact that its wealthy families, such as the Rothschilds and Bethmann Hollwegs, own large properties, which they manifest no disposition to part with. Nor can it be supposed, for that matter, that tax laws will influence their actions to any great extent. Besides, the law, considered as it must be in connection with the increment tax, favors a holding exceeding 20 years for all properties whose value is in any great degree unearned. This increment tax was first introduced into Frankfort in February, 1904 — the city having the distinction of being the first municipality to introduce the tax into Germany. At first the tax was of very limited application, being raised at the time of transfer, in the case of properties already

¹ This super-tax is not raised if it can be proved that the present selling price exceeds the earlier price of acquisition, including costs of new buildings and enlargements, only by the amount of the tax.

built upon, only in those instances where the holding period had been less than 5 years. For unimproved land, the holding period was fixed at less than 10 years. In both cases the tax was levied on that part of the value increase in excess of 30% of the price of acquisition at the time of the last transfer. For a value increase of 30 to 35% the tax was 5%; 35 to 40% the tax was 6%; and so on, 1% more for each 5% additional increase until 25%, the highest rate, was reached.

The Währschaftsgeld (*i. e.* increment tax and transfer tax together with the super-tax) did, therefore, provide for heavier taxation of both short-time and long-time holdings, in favor of holdings of medium duration, improved property, for example, held for a period of from 5 to 20 years, paying only the 2% transfer tax, no matter how great the value of the unearned increment which had accrued since the last transfer. After the short period of ten years, furthermore, the unimproved properties were also freed from the increment tax, being subject only to the low rates of the super-tax, in addition to the transfer tax. Where land values had risen rapidly, the law must have operated as a marked check upon transfers within the set 5 and 10 year periods. Probably such considerations led to the changes in the law which took place two years later.¹ The super-tax is now levied in all cases only on transfers taking place after a 20 year holding period, and the increment tax is levied in all cases in which the holding period is less than 20 years, upon all value increases amounting to 15% or more of the original purchase price. The rates are: 2% for an increase of 15 to 20%; 3% for an increase of 20 to 25%, etc., rising 1% for each 5%

¹ Cf. page 178, note 3.

increase until the maximum rate 25% is attained. Naturally the incentive to holding property for the longer period, exceeding 20 years, is very great where the unearned increment is a substantial part of the sum obtained at the time of sale. To quote Dr. Boldt: "What land owner under the system prevailing in Frankfort will sell his property in the 20th year, if he has achieved a great value increase, knowing that 25% of that increase, which may amount to three-fourths of the entire selling price, must be paid out as taxes? A year later, in place of the increment tax, he has only to pay a super-tax amounting to 2% of the purchase price."¹

In the calculation of the increment and in the manner of assessment local differences have been marked. Where, as in Frankfort, the amount of the tax increases with the value increase estimated in percentages of the price of acquisition, a very substantial reduction is brought about by adding to the purchase price the outlays for betterments, loss of interest, and several other items.² If, on the other hand, as seems more logical, these outlays be deducted simply from the sum representing the difference between the purchase price and the selling price, and the resultant increment be calculated as a percentage of the purchase price, the result is decidedly different.³ As Weissenborn has pointed out, if the tax is designed

¹ Cf. Boldt, *Die Wertsuwachsteuer; ihre bisherige Gestaltung in der Praxis*, etc., p. 84, Dortmund, 1909.

² Permanent improvements, street costs, sewage payments, a sum equal to 5% of the earlier purchase price (as compensation for the costs of transfer), and, in the case of unbuilt lands, loss of interest allowed for at the rate of 4%.

³ For example, Selling price, 10,000 m., Purchase price, 5,000 m.; 2,000 m., deducted for betterments, loss of interest, etc., $10,000 - (5,000 + 2,000) = 3,000$ m.; $\frac{3}{5} = 43\%$ (under the Frankfort system where 7,000 m. figures as the basis of the percentage calculations).

$10,000 - 5,000 - 2,000 = 3,000$; $\frac{3}{5} = 60\%$, increment increase, obtained by the employment of the second method.

H. Weissenborn, *Die Besteuerung nach dem Wertsuwachs insbesondere die direkte Wertsuwachsteuer*, Berlin, 1910.

to reach the genuine increment increase, the last named proceeding is more logical. The general practice — all income on one side and all outlays on the other, resembles a statement of business loss and gain, rather than an attempt to estimate the increment value as such. Where, as in Berlin and Hamburg, for example, the tax is calculated on the basis of the absolute amount of the increase, the question as to how to make deductions presents no similar difficulties. But here a progression of the tax rate in accordance with the absolute amount of the increment value is hardly to be recommended. A large absolute gain may be entirely justifiable in view of the size of the original capital outlay. Certainly, if the tax is viewed as a payment for especial benefits (gains) made possible through community activity, the Frankfort proceeding seems better. But the concept "unearned increment" is, after all, elusive and the very term "unearned" implies a necessary consideration of the individual. Even in the deduction of outlays for permanent improvements, some portion of the "unearned" increment may be withdrawn, for who can say that the cost outlays may not have been greater than the resultant addition to property value. In short, they may have been ill-conceived. On the other hand, they may have been directly the cause of a disproportionately great rise in value. In that case, does the failure to deduct more than the cost of the improvements result in a taxation of "earned" value increase? It would seem so, especially if the outlays were so wisely timed that some of the resultant gain can properly be assigned to individual initiative and cleverness.

It goes without saying that where property has long been held in the same hands, and there exist no

records attesting its value at the time of the last transfer, the difficulties incident to estimating the size of the unearned increment may be exceedingly great. The 20 year period of land-holding, which for Frankfort constitutes a time limit for the imposition of the increment tax, obviates the necessity of any general estimates of property valuation for a particular date. If no transfer has occurred within the set time, the super-tax, levied on the current selling price, takes the place of the increment tax.

One serious objection both to the transfer tax and to the increment tax is the fluctuating nature of the returns. It is impossible to count upon a fixed sum which can be used for defraying regularly recurring expenses. The estimates of returns show tremendous variations from the actually achieved results. In Frankfort, for example, in 1905 these taxes brought in 2,093,000 m. more than the estimated revenue; in 1908 and 1909, the returns were 578,000 m. and 535,400 m. respectively, under the estimates.¹ In the case of the other taxes, the difference between the estimates and the returns is usually quite unimportant, and a slight excess here balances a small deficit there. Frankfort has solved this difficulty of fluctuating revenues by assigning a large part of the returns from the transfer tax and the entire proceeds of the increment tax to special funds not so dependent upon invariable sources of income. One-fourth of the transfer tax (*i. e.* $\frac{1}{4}\%$ of the purchase price of the transferred property) has been credited to the fund for street construction (*Strassenneubaukasse*) since

¹ Verwaltungsbericht der Stadt, 1910-11, section Rechner-Amt, p. 6 of the Sonderabdruck. For 1910-11, the returns for the *Währschaftsgeld* were, however, deliberately overestimated in order to facilitate a transfer from the *Ausgleichsfonds* (equalization fund), as the administration did not wish to increase the taxes and yet had to grapple with the problem of meeting increased expenditures.

1893. Another fourth and the entire amount collected from the increment tax has been distributed among building funds for schools, for hospitals, and for general building purposes.¹ The returns from the increment tax proper are small: for 1910-11, 231,000 m. (improved property), and 71,700 m. (unimproved). The super-tax amounted to 248,200 m. and 109,900 m. respectively, leaving 526,500 m. and 139,400 m. for the proceeds from the general transfer tax.² For payment of the transfer tax together with the super-tax, buyer and seller are jointly liable; for the increment tax, only the latter is held responsible.³ These legal obligations say nothing as to the actual incidence of the tax. The fact that the purchaser may be willing and sometimes contracts to pay the tax may simply indicate that he would have consented to pay that much more for the property had the tax not existed. In the case of a simple transfer tax, where the percentage payment is the same for all, probably some, a large part, or all of the tax may be shifted. In Frankfort, where the real estate owners enjoy a semi-monopoly, no doubt shifting does occur. In the case of the increment tax, the burden cannot be so easily transferred. The fact that the tax hits some property owners so much more heavily than others, even in the case of equally valuable properties, makes it more difficult. There does follow a more subtle and indirect effect upon real estate prices which is not easy to analyse. Transfers become fewer, speculation less active, but terms of sale often harder.⁴ However,

¹ Cf. Haushalts-Plan der Stadt Frankfurt a. M., 1912-13, p. 69: Steuern und Abgaben. Überweisung an Fonds.

² Cf. Rechner-Amt, 1910, Sonderabdruck, p. 58.

³ For a clear account of the methods employed to evade payment of the increment tax, cf. Weissenborn.

⁴ Persons questioned, officials and others well-informed, state that private speculation is at a low ebb in Frankfort, but prices of land no lower.

so many other factors making for price increase enter into consideration and complicate the problem that a definite opinion could only be reached after much painstaking and intensive investigation. Suffice it to say, the tax appears frequently to cause stagnation, where there is need to stimulate sales.

The Frankfort Chamber of Commerce (*Handelskammer*) complains bitterly of the numerous impositions which are placed upon real estate transfers and cites statistics to illustrate the steady decline in real estate operations since 1905.¹ In addition to the local transfer and increment taxes, comes another tax of 1% imposed by the state and since 1909 an additional $\frac{1}{2}$ % for the benefit of the Empire. As the transfer taxes are levied, independent of gain or loss, upon the value of the property transferred, they are exceedingly unequal in operation, their incidence is doubtful, and considering their number and amount, they are peculiarly burdensome.

The example of Frankfort in introducing the increment tax was speedily followed by other communities until in 1910 of 98 larger Prussian cities, 66 had similar taxes² to say nothing of numerous other German cities outside Prussia. And now since April 1, 1911 the German imperial increment tax (*Reichswertzuwachssteuer*) has deprived the cities in part of this source of revenue.³ Under the new law, the cities are to retain 40% of the imperial tax, the states 10%, the Empire 50%.⁴ For cities in which the tax had been collected prior to the passage of the imperial law, a sum equal to the average returns under the communal

¹ Cf. *Wirtschaftsbericht der Handelskammer zu Frankfurt am Main*, 1909, p. 136 ff.

² *Kommunales Jahrbuch*, 1911-12, p. 635 ff.

³ *Reichswachststeuergesetz*, 14. Feb. 1911.

⁴ *Zuwachststeuergesetz*, § 58.

imposition is assured until 1915.¹ As a special concession, Frankfort has been permitted the retention of its tax for two fiscal years, 1911-12 and 1912-13 — the proceeds, however, in excess of the average return prior to 1911 being transferred to the Empire.² The action of the Empire in seizing upon this tax for its own use gave rise to a spirited debate, and to general complaint from the local authorities, not only because it seemed an unwonted invasion of the field of local taxation, but because it forced them to give up a source of revenue which might eventually prove lucrative.³ The cities urged their right to this tax, moreover, on the ground that the community activity was responsible for the increase in real estate values, and that some part of the value thus created should go to them in the form of taxes. The lengths to which the benefit theory of taxation may be carried were admirably illustrated when it was contended, on the other hand, that the Empire through its services as protector and creator of the nation was the most potent factor in German economic and industrial development, and by virtue thereof, the "unearned" increment properly belonged to it.

Apart from the unconvincing character of these metaphysical refinements, the collection of the tax presents enormous administrative difficulties, when undertaken for imperial account — tremendous labor on the part of the officials, harrassing calculations and ridiculously paltry returns. Furthermore, the individual hardships which such a tax must occasionally

¹ I. e., provided the law had been passed before April, 1909, and had gone into effect before Jan. 1, 1911.

² Cf. *Zuwachsteuergesetz*, § 60.

³ *Zuwachsteuergesetz*, § 59. The localities are permitted, under certain restrictions, to raise additions to that portion of the increment tax transferred to them by the state.

impose are only emphasized when its collection is undertaken in wholesale fashion. The lack or the existence of an unearned increment is an objective fact; and the tax is therefore levied without regard to the financial circumstances of the tax payer. But local ordinances can, at any rate, be adapted to peculiar local circumstances, whereas the utter impossibility of such local adaptation is one of the prime defects of the imperial law. The Prussian state relinquished its right to the "real" taxes, because they were objective taxes which could only be administered by the central political organization with too great disregard of individual and local interests. The Empire now takes possession of a tax (albeit a relatively unimportant one) even less adapted to its purposes, thereby reducing to uniformity a mass of legislation hitherto varying with the differences in local needs and conditions.

The K. A. G. permits the communities to introduce a special tax on trade (commercial, industrial, etc., undertakings), failing which, the trade tax (*Gewerbesteuer*) must be levied as a fixed percentage of the rates existent under the Prussian *Gewerbsteuer*.¹ It is necessary to describe the main features of the state tax, for the reason that Frankfort, despite its special imposition, has retained all the characteristic features of the Prussian system.² The state tax, altho primarily objective in character, takes more account of individual ability to pay than the other "real" taxes, notwithstanding the fact that the law

¹ The K. A. G. also provides for a distribution of this tax in the case of taxable enterprises extending over several tax districts, cf. § 32 ff.

The Prussian railway is especially exempted from payment of this tax. Other state enterprises may be taxed, however, as well as the public service corporations, industrial undertakings, etc., belonging to the communities and other public bodies. All imperial enterprises are exempt.

² *Gewerbsteuergesetz* vom 24. Juni 1891. (Prussia), ed. Fernow, Berlin, 1910.

permits no reductions for interest on business debts. As a supplementary tax—in a certain sense a privilege tax—designed to exact compensation for the special advantages which the business and industrial interests derive from community activity, the failure to take account of debts is to be justified. On the other hand, it may be said that where the value of the privilege (as measured by the returns) is slight, exemptions may be permitted and classifications may be introduced. As a matter of fact, undertakings bringing in less than 1,500 m. per year are freed from the tax, and the other tax payers are separated into four classes, based primarily on the amount of income, the capital serving as a supplementary means of classification.¹ To the first class belong those establishments with a yearly return of 50,000 m. or more on a capital of 1,000,000 m. or more. In this class the tax is assessed at a rate approximately equal to 1% of the yearly income; the lowest payment, for incomes of 50,000 to 54,800 m., being 524 m., the tax increasing 48 m. for each additional 4,800 m. The other three classes embrace

(a) Establishments with a yearly return of 20,000 to 50,000 m. or a capital of 150,000 to 1,000,000 m.

(b) Establishments with returns 4,000–20,000 m. or capital of 30,000–150,000 m.

(c) Establishments with returns 1,500–4,000 m. or capital 3,000–30,000 m.²

For these last three classes tax associations³ are formed which are assessed collectively for fixed sums previously ascertained by multiplying the number of

¹ In case of a classification based on capital, if the establishment in question has not for two years obtained the returns of that class, it can be put in a lower class for purposes of taxation.

² Cf. *Gewerbesteuergesetz*, § 6 ff.

³ *Ibid.*, § 13.

tax payers within each class by a so-called *Mittelsatz* (medium rate), which is 300 m. for class II, 80 m. for Class III, and 16 m. for Class IV. The tax committees for the several classes, composed of a chairman (official) and members elected by the tax payers from among their own number, then apportion the tax among those belonging to the various tax associations, within the limits imposed by law. To illustrate, the highest and lowest contributions for Class II are 480 m. and 156 m. respectively; for Class III, 192 m. and 30 m., and for class IV, 36 m. and 4 m.¹

In reckoning the taxable returns, expenses of management and replacement costs, representing a "proper" allowance for value depreciation, are to be subtracted, but all sums transferred to betterments, extensions, etc., interest on the capital sum invested and on debts incurred in the course of business are to be reckoned as part of the return.² As the interested ones are themselves forced to apportion the amount, in the case of the three lower classes, and as the extent of their obligation is fixed, the arrangement seems in so far calculated to produce a very fair division. The law, however, does not make personal declarations compulsory, and the commissions (really the chairman) have to estimate largely from superficial indications the amount of the return, and it is consequently likely that many unsuspected inequalities exist.

In the Frankfort special ordinance,³ the highest class is assessed for 142% of the rates fixed under the state tax, Class II is assessed for 133%, Class III 100%, and Class IV, 60% (the proceeds of the department store tax — *Warenhaussteuer* — being applied to reduce by 40% the payment that would otherwise

¹ *Gewerbesteuergesetz*, § 14.

² *Ibid.*, § 22.

³ *Gewerbesteuerordnung*, 19. Feb. 1904, F. a. M., *Bürgerbuch*.

be demanded of the fourth class).¹ To these payments comes an additional tax, representing that portion of the earlier tax on rentals collected for buildings and apartments used for business or industrial purposes. For undertakings requiring the use of rooms with a rental value exceeding 300 m., a tax is levied beginning with 1.44 m. for a rental value of 300-350 m., and rising to a maximum rate of 2% for all rentals exceeding 2,500 m. The local Chamber of Commerce inveighs against the heavy and unequal burdens imposed by this tax on rentals.² Just as the amount of the rental outlay for dwelling houses is by no means a measure of family incomes, so are the rentals paid by industrial establishments in no sense a measure of the amount of the profits. Not only are different classes of industrial and commercial ventures unequally burdened but the 4 different tax paying classes are likewise very unequally taxed, and to the injury of the lower classes. The Chamber of Commerce (*Handelskammer*) estimates, for example, that the tax on rentals expressed in percentages of the state tax amounts to about 15.1% for Class I, 37.1% (Class II), 65.1% (Class III), and 79.9% (Class IV). For different sorts of business the inequalities are even more glaring. Hotels, inns, etc. pay to the city a total trade tax (*Gewerbesteuer*), amounting to about 320.2% of the state tax. The banks and brokerage houses pay only 145.9%, altho from the point of view of importance and absolute amount of the returns they take first place. Second in importance are the metal industries and trades, averaging only about 155.9% of the state tax. Estimating the rental super-tax alone, by classes, for dif-

¹ As a matter of fact, the proceeds of the *Warenhaussteuer* had to be used (1910-11) to cover previous advances, and Class IV had to pay the entire amount of the tax under the *Gewerbesteuer*.

² Cf. previous reference to *Wirtschaftsbericht der Handelskammer*.

ferent occupational groups, the following result is obtained.¹

	Class I	Class II	Class III	Class IV
Hotels, inns, etc.	134.8%	160.4%	470.3%	525.0%
Metal trades	10.	39.	67.2	97.3
Textile and Clothing trades...	36.1	46.2	88.7	136.2

The outcome is, of course, a relatively great and haphazard increase of the burden for the lower income classes. Naturally, some portion of these taxes is shifted to consumers through the higher prices charged for products and services, but where outside competition has to be met, or where the tax burden for competing establishments is so unequal, the original tax payer who happens to be relatively overburdened, cannot shift the imposition entirely to others. The city administration feels the desirability of doing away with the rental super-tax, or if financial necessity makes that impossible, of introducing changes which will make the inequalities less glaring. One city official expressed his conviction that next year the law would be altered with this end in view.²

In 1910-11 the proceeds of the *Gewerbesteuer*, as a whole, amounted to 2,390,000 m. of which sum the banking and brokerage firms contributed over 25%. Of the total number of tax payers, 12,568 (1910-11), 438 belonged to Class I, 466 to Class II, and 3,019 and 8,645 to Classes III and IV respectively.³

The *Betriebssteuer*,⁴ a recurrent license tax on hotels, public houses, and the retail trade in alcoholic liquors is levied in connection with the *Gewerbesteuer*, according to the provisions of the state law, altho

¹ The results for Class IV, allow no deduction for the 40% payment usually contributed by the *Warenhäussteuer*.

² [Stadttrat Dr. Bleicher.]

³ Cf. *Statistische Jahresübersichten der Stadt*, 1910-11, pp. 111, 112.

⁴ Cf. *Gewerbesteuergesetz*, § 50.

the state has relinquished its right to the proceeds of this tax also. Frankfort raises 100% of the state imposition and the returns are quite small: 53,600 m. (1910-11).¹ For establishments belonging to Class I (Gewerbsteuer), the tax is 100 m.; Class II, 50 m.; Class III, 25 m.; Class IV, 15 m. For establishments not taxable under the *Gewerbsteuer*, the payment is 10 m.²

The license tax on the sale of intoxicants,³ as found in American municipalities, is not viewed with a great deal of favor in Germany, apparently, altho there is reason to suppose it could be developed into a lucrative source of income. The Frankfort magistracy this year urged the introduction of such a tax for concessions granted for retailing wine, beer, or spirits; 500 m. for the small establishments freed from payment of the *Gewerbsteuer*, and 1,000, 2,000, 3,000 m. respectively for establishments belonging to the 4 classes taxable under the *Gewerbsteuer*. It was estimated that this tax would bring in 300,000 m. the first year. The proposition was rejected with a good deal of heat by some of the Social Democrats in the city assembly, who considered it socially reprehensible, as it would make more expensive all forms of convivial enjoyment for the masses of the people. No emphasis was laid on the tax as a regulative or repressive measure — indeed it was the product of a search after more revenue, and repression would have defeated its aim.

¹ The tax is rather a police than a finance measure.

² 2,572 establishments pay this tax.

The communities are also required by the state to tax traders who temporarily establish themselves in a locality. For each week, 50 m. (Class I); 40 m. (Classes II and III); 30 m. (Class IV). The returns are insignificant: 250 m. (1910-11) in Frankfurt. (*Wanderlagersteuer*.)

³ Two suburbs of Frankfurt, Heddernheim and Rödelheim have "*Konsumsteuer*" or did have till Mar. 31, 1912.

The Warenhaussteuer¹ (department store tax) produces so slight an income that it would scarcely merit discussion, were there not especial reasons that make it deserving of consideration. In the first place, it is a tax which the communities are forced to raise in accordance with an act passed by the Prussian Landtag in 1900. That fact is of itself sufficient to raise a discussion as to whether the provisions of the K. A. G. have not been violated in spirit, at least. In general, that law left the communities free to adapt their tax laws to their own especial needs, merely providing for a distribution of the tax imposition in a general way, the precise method of levying the tax being matter of choice, except in the case of the income tax. The Warenhaussteuer, however, not only prescribes in detailed fashion the rate of taxation and the method of levying, but it also provides for the distribution of the proceeds. The ill-advised, not to say malicious character of the legislation is evident after a cursory examination. The law distinguishes four groups of wares² and defines a department store (Warenhaus) as a retail establishment which deals in wares belonging to more than one of these groups. The difficulty of defining the groups in such fashion as to bring under the same head articles which are naturally or customarily sold together, and yet not to make the groups too inclusive, is almost insurmountable. Where there exist doubts concerning classification, the Minister of Commerce must decide to which group a par-

¹ Gesetz betreffend die Warenhaussteuer vom 18. Juli 1900 (Struts, Berlin, 1900) and H. Gehrig, Die Warenhaussteuer in Preussen, Leipzig-Berlin, 1906.

² Roughly:—

- (a) Articles of food and drugs.
- (b) Textiles, house furnishings, etc.
- (c) Agricultural implements, industrial supplies.
- (d) Jewelry, artists' wares, musical instruments, etc.

ticular article belongs. The tax is levied on department stores with a turnover exceeding 400,000 m., the rate rising with the amount of the turnover. The turnover is defined as the cash receipts of the year, including outstanding sums due for articles sold during the year, and deducting payments made for purchases of an earlier period. No deduction is made for uncertain or uncollectible outstanding accounts. The tax, which is about 1% for a turnover of 400,000 to 450,000 m. (to be exact 4,000 m.) rises gradually until it reaches 2% for a turnover of 1,000,000 m., thereafter increasing by 2,000 m. for each 100,000 m. addition to the turnover. If the tax exceeds 20% of the taxable returns, as they have been computed for purposes of the *Gewerbsteuer*, it may be reduced to 20%, but under no circumstances below one-half the normal rate (even tho the entire net profits and more be taxed out of existence).¹

The tax is assessed by the commission having charge of the assessments for Class I of the *Gewerbsteuer*. The returns are to be devoted to reducing the taxes paid by those belonging to Classes III and IV (*Gewerbsteuer*) or towards defrayal of communal expenditures made primarily in the interests of the smaller establishments. The *Warenhaussteuer* (department store tax) is raised only to the amount of the excess above the *Gewerbsteuer* in addition, of course, to the payment of the *Gewerbsteuer*. But when the latter tax is collected from a number of undertakings belonging to the same person, not all of which are subject to the *Warenhaussteuer*, only that portion of the *Gewerbsteuer* is to be considered, for the purpose of reckoning deductions, which is collected

¹ For a branch undertaking, whose domicile is outside Prussia, a tax of 2% is collected irrespective of the amount of the local turnover. An alien has a right to exemption if evidence can be presented to show that the whole undertaking has a turnover of less than 400,000 m.

from the particular establishment subject to the *Warenhaussteuer*.¹

This tax, whose aim was to tax the department stores out of existence or at any rate seriously to cripple them, partly accomplished its object. Many department stores thereafter limited their trade to one of the four designated branches, while the monopoly of a few of the largest stores, able to transfer the tax burden in part to the wholesale dealers and finally to their customers, was merely strengthened. The financial returns are quite insignificant — in Frankfort 46,000 m. (1910-11) paid by just two establishments.²

In addition to the taxes mentioned Frankfort secures quite a sum from a tax on public performances, theatres, picture-shows, lectures, prize-fights, etc., — in fact, practically every form of public amusement is taxed.³ The tax is 5 pf. for each 50 pf. or fraction thereof paid for admission (admission prices under 55 pf. free where the higher interests of art or science are subserved). The returns (1910-11) were 301,600 m.⁴

A tax on horses used for purposes of pleasure is also raised: 30 m. for each animal. The revenue is very small (15,200 m.),⁵ and the tax today unusual in Prussia. A tax on dogs is very generally found, amounting in Frankfort to 20 m. per animal and bringing in a return

¹ I. e., suppose a tax payer is assessed for 15,000 m. *Gewerbesteuer*, and 10,000 m., *Warenhaussteuer*. Perhaps only $\frac{1}{2}$ of the former tax falls on the department store, which is one of several establishments owned. Then not only the full *Gewerbesteuer* must be paid but an additional 5,000 m. the sum whereby the *Warenhaussteuer* (10,000 m.), exceeds that portion of the *Gewerbesteuer* (5,000 m.) levied on the department store.

² Cf. *Haushalts-Plan*, 1912-13, p. 71.

³ The tax was originally levied on theatre tickets. New law, Mar. 10, 1910. Cf. K. A. G., § 15.

⁴ For 1912-13, the tax on picture-shows has been raised to 10 pf. for each 50 pf. paid for admission.

⁵ *Haushalts-Plan*, 1912-13, pp. 68, 71.

of 191,800 m. During the current year this tax has been raised to 30 m. for all save draught animals.

The list of communal taxes raised in Frankfort proper is herewith exhausted.¹ And, indeed, the list includes all the important communal taxes to be found in Prussia at large. Of course differences in detail, occasional special taxes, exist, and differences in emphasis are certainly present: that is, differences in the relative amounts collected from the different sources. In fact, there are considerable differences between the tax systems of Frankfort and its own suburbs, 15 in number, 11 of which were only incorporated in April, 1910. These former country districts (*Landgemeinden*) still retain their own tax systems wholly or in part. But in analyzing the various forms of taxes for the purpose of studying the finances of the city, Frankfort alone (*i. e.* exclusive of the 15 suburbs) has been considered. Otherwise an unnecessary confusion would have resulted, for the returns from all the suburbs put together are, relatively speaking, quite unimportant, and Bockenheim, the only suburb showing returns of any size, has a tax system differing very slightly from that of Frankfort. It is, therefore, fair to say that a more correct as well as a clearer idea of the city finances can be got by ignoring these local differences.²

Of the total returns from taxes collected in 1910-11, the income tax constituted 60%; the tax on buildings (*Haussteuer*) 18.6%; the trade tax (*Gewerbsteuer*), 9.9%; the *Währschaftsgeld* (transfer and increment tax), 6.67%; and the tax on land unbuilt (*Landsteuer*),

¹ In some of the suburbs a *Konzessionsteuer* and a *Branntweinhilfssteuer* are raised. Perhaps the *Einquartierungsgeld* ought to be mentioned. It is raised as an addition to the income tax and levied on the higher incomes—a small sum to defray expenses connected with the quartering of troops.

² Cf. *Haushalts-Plan* for a series of years; tax returns for Frankfort and for suburbs given separately.

2.4%. Ten years ago the proportion of the total taxes obtained from the general income tax was practically the same. Despite supplementary sources of revenue, it is and seems likely to remain the chief reliance of the cities as well as of the state, and present indications are that it will have to bear most of the increased tax burdens which the future seems likely to bring. In Frankfort it was only through the greatest efforts that a further increase in the rates of the local income tax was avoided for the year 1912-13. Another year this increase will likely be recognized as inevitable.

Expressed in percentages of the amounts that would have been collected under the state laws, the "real" taxes show no marked deviations from the usual except in the case of the land tax, assessed according to market value, which is estimated to average 2,687% of the returns under the rates imposed by state law.¹ The explanation is not difficult. Under the older system, unbuilt city lands either escaped taxation entirely, or were taxed on the basis of an income derived from their possible utilization for gardening and agricultural purposes. The house tax amounted in 1910-11 to 145.93% of the state tax; the trade tax (*Gewerbsteuer*) averaged 150%.²

It will be noted that in Prussia no special tax on income from capital investments as such exists. Income from investments in real estate is reached through land and building taxes, income from investments in commercial and industrial establishments through the *Gewerbsteuer*; but other funded incomes escape local impositions except to the extent that

¹ Cf. *Statistische Jahresübersichten der Stadt, 1910-11*, p. 110.

² Of course to form a correct idea of the extent to which the inhabitants are taxed one would have to take account of the direct taxes still collected by Prussia and of the numerous indirect impositions both of the kingdom and of the Empire.

The state income tax collected from Frankfort, 1910-11, amounted to 14,087,000 m. and the *Ergänzungsteuer* 2,528,400 m.

they are reached by the general income tax. It is sometimes urged that these incomes should also pay an especial tax — that they are preferred under the present system. To this it may be replied that the "real" taxes are regarded as special payments for special benefits which particular investors receive from the community. And there is furthermore the practical objection that personalty evades taxation with relative ease, and the heavier the impositions, the greater the tendency to evasions. The gains through the introduction of such a special tax might be more than counterbalanced by the losses suffered by the general income tax.

A proposition that has been frequently advocated is that the cities be permitted to levy a percentage addition to the *Ergänzungssteuer* (supplementary tax on general property) in the same way that they do to the income tax. Theoretically there can be no objection to the procedure. However, real estate owners, business men, and industrialists would complain bitterly of double taxation. It would be difficult to pacify them on the ground that their special taxes were based on benefits received, while their property, as a measure of their ability to pay, constituted the basis of the new imposition. Then there is the further disadvantage that the sources of revenue for state and community would be made identical, and reforms in the Prussian finances have properly aimed at separation to the extent that that is possible, especially with a view to preventing impairment of the productivity of these taxes. For it cannot be denied that the higher the tax rate, the greater the number of evasions even in conscience disciplined Prussia.

In addition to the revenues which the communities receive from the regularly recurrent taxes, the payments

which take the form of fees and special assessments are important sources of income. Here again the K. A. G. opens a very wide field to the operation of the principle of payment in accordance with benefits received. For public expenditures bringing especial advantages to business men or property owners special contributions may be required and must be collected if otherwise the costs, including interest and amortisation payments on the capital sum expended, would have to be met by taxes.¹ Assessments for street construction, sewage extensions, etc., are the most common form of payment. A rather unusual extension of the principle of special assessment for the use of the streets is found in Frankfort, where certain concerns engaged in heavy hauling operations, for example, several breweries and a flour mill, contribute to the cost of upkeep.² The practice is unquestionably justified, for why should the community defray all the costs of repairs, hastened by the continuous use of the streets by private individuals and private companies?

The design of Frankfort to assess fire insurance companies for partial defrayal of the costs of the city fire department did not materialize,³ as it was felt to be a too far-reaching extension of the principle of assessment.

The K. A. G. also aims to bring about a development of the fee system for the use of public institutions, and, indeed, such fees are made obligatory in case particular individuals or classes are especially advantaged (*i. e.* providing the latter have not been previously forced to defray a part of the costs through

¹ K. A. G., § 9.

² *Haushalts-Plan, 1910-11*, section, Tiefbauamt, contributions from companies for the use of city streets 3,965 m., Breweries 3,581 m., Flour and bread, 300; total, 3,881 m.

³ Adickes-Woell edition, K. A. G., note 2 to § 9.

special assessments or taxes).¹ The fees are to be fixed in advance according to a set scale. A consideration of persons without means is permissible (*nicht ausgeschlossen*). The chief administrative court of appeal (*Oberverwaltungsgericht*) in interpreting this clause ruled, nevertheless, that a grading of fees for the same services according to ability to pay or other standards was not permissible. This decision led to the passage of a declarative law which stated that it was permissible to grade the fees according to ability to pay, even to the point of entirely freeing certain individuals from payment. Another decision of the court (March, '07) gave a restricted meaning to the declarative law also. It was held that a reduction of the normal ² tariff may be made, but not an increase according to increasing ability to pay, *i. e.* the payment may be reduced below the value of the service by a degression, but it cannot be increased by a progression exceeding the value of the service.³

The raising of fees is not obligatory in the case of schools for elementary instruction, of hospitals, nor in general for institutions intended primarily to meet the needs of the poorer classes. For those attending the higher schools a payment is, however, compulsory

¹ In the case of communal institutions or undertakings which especially benefit a particular section or a particular class of citizens, heavier tax impositions may take the place of fees or assessments. *Cl. K. A. G.*, § 20.

Heavier taxation of individual industrial or commercial establishments may also be permitted.

The principle is even extended to intercommunal relationships and it is provided that whenever a community through its industries, etc., is the cause of the imposition of extra and unusual burdens upon a neighboring community, it can be forced to contribute to the resultant extraordinary disbursements. *K. A. G.*, § 53.

² The normal tariff as defined in the *K. A. G.*, § 4:—

The rates are, as a rule, to be so fixed that the costs of administration and upkeep, including the payments for interest and amortisation on the capital expended, are covered.

³ It will later be apparent that the practice in Frankfort hardly conforms to this dictum.

and from this source Frankfort obtained in 1910-11 fees (Schulgeld) amounting to 1,322,700 m. The city also collects hospital fees from those patients able to pay (in many cases the payments are made from sick funds) granting reductions to persons with incomes under 2,100 m. Minor fees are, of course, raised, for building inspection, for example, through the registry offices (Standesämter), the Gewerbe- and Kaufmannsgerichte, etc. But a further consideration of fees can best be discussed in connection with the various municipal public-service undertakings.

ANNA YOUNGMAN.

NOTES AND MEMORANDA

THE DISSOLUTION OF THE POWDER TRUST

IN the May number of this journal appeared an article by the present writer on the Powder Trust. At the time the article went to press, the dissolution plan of that combination had not been agreed upon, altho dissolution had been acquiesced in by it. In consequence the history of the organization was carried only to the interlocutory decree of June, 1911.

On June 13, 1912 the opinion of the court and final decree were filed in the United States court for the district of Delaware. The suit as to fourteen of the corporations and two of the individual defendants was dismissed. The remaining twenty-seven¹ were enjoined and the combination ordered dissolved. The present note will endeavor to set forth briefly the plan devised, thus completing the history begun in the May number.²

By the terms of the decree, E. I. du Pont de Nemours and Company (1902, Delaware corporation),³ the Hazard Powder Company, Delaware Securities Company,⁴ Delaware

¹ Hazard and Laffin & Rand Powder Companies, Eastern Dynamite Company, Fairmount Powder Company, Judson Dynamite & Powder Company, Delaware Securities and Delaware Investment Companies, California Investment Company, E. I. du Pont de Nemours & Company of Pennsylvania, du Pont International Powder Company, E. I. du Pont de Nemours Powder Company, E. I. du Pont de Nemours & Company, Thomas Pierre, Alexis, Alfred, Eugene, Eugene E. Henry, Irene Francis and Victor du Pont, J. A. Haskell, A. J. Knoxham, H. M. Parkedale, E. G. Buckner and Frank Connable.

² For the facts and figures, see the text of the decision: *United States of America v. E. I. du Pont de Nemours and Company*. In the district Court of the United States for the District of Delaware, Opinion of the Court and Decree.

³ Cf. Stevens, "The Powder Trust," *Quarterly Journal of Economics*, May, 1912, vol. xxvi, p. 470.

⁴ *Ibid.*, p. 472.

Investment Company,¹ Eastern Dynamite Company,² California Investment Company, and the Judson Dynamite and Powder Company³ were ordered dissolved and their assets distributed among their respective stockholders. In addition to the E. I. du Pont de Nemours Powder Company (1903, Delaware corporation), two new corporations were provided for, with the alternative that the Laffin and Rand and Eastern Dynamite companies might be re-organized and utilized instead of two new corporations, or either of the former for either of the latter. In case the Laffin and Rand Company was not so utilized it was provided that it should be dissolved and should distribute its property to stockholders.

To the first of these two new corporations were assigned three plants for the manufacture of dynamite, one in New Jersey, one in Michigan, and one in California; seven plants for the manufacture of black blasting powder, two in Pennsylvania and one each in New York, Ohio, Wisconsin, Kansas, and California; and two plants for the manufacture of black sporting powder, one in Connecticut and one in New York. To the second corporation were allotted four plants for the manufacture of dynamite, one located in New Jersey, one in Michigan, one in Missouri, and one in California, and five for the manufacture of black blasting powder, two in Pennsylvania and one each in Tennessee, Illinois, and Kansas.

The above arrangement would leave to the third corporation, the E. I. du Pont de Nemours Powder Company, eight plants producing dynamite, one located in each of the states of Missouri, Wisconsin, Washington, Pennsylvania, Colorado, Indiana, New Jersey, and Alabama; seven plants manufacturing black blasting powder, one each in Colorado, Alabama, Pennsylvania, Iowa, W. Virginia, Oklahoma, and Minnesota; two plants for the manufacture of black sporting powder, one in Delaware and one in New Jersey; and

¹ *Ibid.*, p. 473.

² *Ibid.*, p. 463. If used in reorganization, however, the Eastern Dynamite Company was not to be dissolved. Cf. below.

³ *Q. J. E.*, vol. xxvi, p. 470.

also two plants for the manufacture of government smokeless powder, both located in New Jersey.

It will be noted from the above enumeration that neither of the two new corporations were given plants for the manufacture of smokeless sporting or government smokeless powder. It was, therefore, decreed that the first of the new or reorganized corporations should have transferred or furnished to it at Kenville, New Jersey, or other suitable eastern point a plant with a capacity of 950,000 pounds of smokeless sporting powder per annum. And further, to this concern the brands owned by Laffin and Rand were ordered to be transferred. The situation in regard to government smokeless powder was left unchanged. This is explained in the Court's opinion:

"This is because a division of that business among several competing companies (there being only one customer) would tend to destroy the practical and scientific co-operation now pursued, between the Government and the defendant company just named, and to impair the certainty and efficiency of the results thus obtained."¹

The interesting feature of this reorganization scheme is, of course, the method of handling the securities. In return for the transfer of the above enumerated properties the two new or reorganized concerns were to pay a valuation therefor based on the last inventory and including also a fair valuation for brands and good will, as follows:

Fifty per cent of the purchase price in ten year, six per cent non-cumulative bonds not secured by mortgage, "payable if earned by the company during said year, or to the extent thereof earned, but not otherwise."²

Fifty per cent of the purchase price in the stock of the two corporations respectively, to be for the time being their total stock issues.

All the stock and one half of the bonds, or proceeds of the bonds, thus received, were ordered distributed among

¹ It should also be added that the Government by ownership and operation of its own plants is enabled to control the price it pays for powder.

² Callable at 102.

the stockholders of the E. I. du Pont de Nemours Powder Company. But in order to safeguard this distribution, the two new or reorganized corporations were each to provide two issues of stock, one with and the other without voting power. In the distribution of stocks to the stockholders of E. I. du Pont de Nemours Powder Company such stock as was to go to any one of the twenty-seven defendants was ordered to be allotted one half in the voting, and one half in the non-voting issues. It is to be noted, however, that upon transfer by death or by will to some person not one of the twenty-seven defendants, such person may exchange the non-voting for voting stock. The same right is also given to the vendee of the twenty-seven defendants, said vendee not being one of them or the wife or child of one of them.

The decree further provides that a fair proportion, so far as practicable, of the explosives business shall be transferred to the new corporations; that for five years they shall be entitled to free access to the records of the Trade Bureau of the trust, and also for the same period to such facilities as the E. I. du Pont de Nemours Powder Company possesses in reference to the purchase of material, experimentation, scientific research, and the like. Six months are allowed to put in force the terms of the decree; that is, until December 15, 1912.

The defendants are enjoined from continuing the combination: (1) By transferring either of the two new businesses to the E. I. du Pont de Nemours Powder Company or vice versa, or by placing the stocks of either in the hands of a voting trust. (2) By making any agreement or arrangement relative to prices or apportioning trade by either customers or localities. (3) By using local price cutting to eliminate competition,¹ except that prices may be lowered to meet or *compete with those of rival manufacturers*. (4) By retaining either the same clerical force or the same offices. (5) By operating bogus independents. All subsidiary con-

¹ It will be remembered that local price cutting was one of the leading weapons of the Trust. Cf. op. cit., Q. J. E., vol. xxvi, pp. 449-450, 455-456, 458-460.

cerns using their names upon their products are required to use also a statement indicating their control.

The three corporations, stockholders, officers, and agents are further enjoined for five years as follows: (1) No one corporation shall have an officer or director who also holds such an office in either of the other corporations. (2) No one corporation shall have the same sales agent as another.¹ (3) None of the corporations shall acquire stock, factories, plants, brands, or business of any other.

It is further forbidden to the individual defendants to acquire within three years any stock or other interest in either of the new companies beyond the share allotted under the plan, altho they may acquire the interest of other defendants.² Finally the new companies are decreed and adjudged to be parties to the cause and bound by the provisions of the decree. The Court retains jurisdiction of the cause and orders that a report be made for its approval after the plan is effectuated.

The effect of this dissolution is difficult to predict. The distribution of plants in order to secure competition promises well. In the transfer of securities the theory has been apparently to divide the strong stock control of the du Ponts by returning half the purchase price of the plants transferred in an income bond. The du Pont interest after this process is again split in half by the distribution to the twenty-seven defendants of half their stock in a non-voting issue. Regarding this latter provision it is to be borne in mind that by sale to other than the defendants or their wives and children such non-voting stock becomes exchangeable for voting stock. This clause is pregnant with suggestions of dummy vendees. It is very questionable if the division into voting and non-voting stock as it stands gives any real safeguard. Had the court forbidden the exchange of the non-voting stock for voting stock for a period of five years or more this provision would have been more satisfactory.

¹ Except that they may sell through the same merchant or dealer.

² This last would not, of course, alter the proportion of the total interest held by the twenty-seven defendants.

As in the Tobacco dissolution, which contains the same clause, the provision against the acquisition for a period of three years by defendants of further interests in the new companies than those assigned, is open to serious criticism. The result after three years no one can foretell. It may be pointed out further that the clause forbidding local price cutting contains one exception that makes it of no value if by chance an independant manufacturer cuts the price first. As the clause now stands that act would apparently justify a price war.

In conclusion it may be said that the injunctions laid upon the defendants and the three corporations are very similar to those of the Tobacco Dissolution Plan and are to that extent subject to nearly all of the objections raised by Mr. Brandeis and Mr. Levy.

WILLIAM S. STEVENS.

COLUMBIA UNIVERSITY.

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